ADOPTING A SINGLE PLANNING MODEL AT THE OPERATIONAL LEVEL OF WAR

A thesis presented to the Faculty of the U.S. Army Command and General Staff College in partial fulfillment of the requirements for the degree

MASTER OF MILITARY ART AND SCIENCE Joint Planning Studies

by

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This thesis determines that the military should not mandate the use of the Joint Operation Planning Process (JOPP) as the single planning model at the operational level of war. Although it is both technically possible and feasible to adopt the JOPP for all services at the operational level, there is no impetus to change the current method the military plans at the operational level. Both an analysis of the service doctrine concerning planning models, and interviews with doctrinal experts from all of the services confirm that the models are similar enough to make the proposed change. However, such a change is neither recognized as important by the experts at each of the service components. In order to avoid making changes simply to make changes, there is no need to adopt a single planning model at the operational level.

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ABSTRACT

ADOPTING A SINGLE PLANNING MODEL AT THE OPERATIONAL LEVEL OF WAR, by James C. Allen, 97 pages.

This thesis determines that the military should not mandate the adoption of the Joint Operation Planning Process (JOPP) as the single planning model at the operational level of war. Although it is both technically possible and feasible to adopt the JOPP for all services at the operational level, there is no impetus to change the current method the military plans at the operational level. Both an analysis of the service doctrine concerning planning models, and interviews with doctrinal experts from all of the services confirm that the models are similar enough to make the proposed change. However, such a change is not recognized as important by the experts at each of the service components. In order to avoid making changes simply to make changes, there is no need to adopt a single planning model at the operational level.

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I would like to recognize the efforts of my MMAS committee in providing their time and effort into discussing and reading the drafts of this thesis. Because of their efforts, I was able not only to complete this thesis, but to contact the majority of the officers and civilians I interviewed throughout the research for this thesis.

I would also like to recognize the input provided by the individuals I interviewed for this thesis. More specifically, Mr. Dale Shoupe and Mr. Matthew Neuenswander invested considerable effort into answering my questions and helped me to focus the additional interview questions to ensure I was asking the right questions. I would also like to recognize Colonel James Klingaman and Major Geoffrey Fuller, who took time away from their duties while deployed in Afghanistan and Iraq to answer my questions.

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ACRONYMS

ARCENT US Army Central Command

CADD Combined Arms Doctrine Directorate

CENTAF Central Air Force Command

CENTCOM US Central Command

CES Commander's Estimate of the Situation

COA Course of Action

JAEP Joint Air Estimate Process

JFACC Joint Force Air Component Commander

JFC Joint Force Commander

JFLCC Joint Force Land Component Commander

JFMCC Joint Force Maritime Component Commander

JIPOE Joint Intelligence Preparation of the Operational Environment

JTF Joint Task Force

JOA Joint Operations Area

JOPP Joint Operation Planning Process

MCPP Marine Corps Planning Process

MDMP Military Decision Making Process

NPP Navy Planning Process

OEF Operation Enduring Freedom

OIF Operation Iraqi Freedom

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CHAPTER 1

INTRODUCTION

Introduction

Increasingly, the US military service forces are working as components of Joint Task Forces (JTF). In order to ensure military operations are synchronized, the Chairman of the Joint Chiefs of Staff published references such as Joint Publication (JP) 1-02, *Department of Defense Dictionary of Military and Associated Terms*, and JP 5-0, *Joint Operation Planning*. Within JP 5-0, the Chairman approved the Joint Operation Planning Process (JOPP). However, the efforts at speaking the same language with respect to planning models appear to stop here. Each of the services has different planning models and produces different forms of plans and operations orders, even though the planning models and operations orders essentially serve the same function.

Friction ensues when officers of different services initially work together as a joint staff. As a hypothetical example, an Army division staff is designated as the core of a JTF headquarters. This newly formed headquarters, comprised primarily of Army staff officers, receives several Air Force and Navy officers to make the headquarters a 'joint' organization and is then deployed into a joint operations area (JOA). As the staff begins to conduct planning in order to prepare for operations, the army staff officers, who have trained together for a significant portion of time, turn to the Military Decision Making Process (MDMP). The Air Force and Navy staff officers may turn to the Joint Air Estimate Process (JAEP), the Air Force planning model, or the Navy Planning Process (NPP), the Navy planning model. Perhaps having predicted the need to work in a joint headquarters, the officers making up the new JTF staff may turn instead to the JOPP as

the planning model. Even if all of the staff officers had turned to the JOPP, the units subordinate to the JTF headquarters would have continued to plan with their service specific planning models and would have expected to receive certain products at specific times based on these models.

Adoption of a single planning model, adhered to by all of the services and taught at each of the separate service schools, would greatly increase the ability of the services and staff officers to communicate effectively in a joint environment and reduce the early friction described previously. Generally, staff officers revert to their education and experience as they confront new problems. If that education and experience was based on a single planning model, their efforts would be better synchronized by following a standardized process. Additionally, every planning staff at the operational level would follow the same planning model which would also increase the capability of conducting parallel planning throughout the process.

Research Question

The primary research question for this study is, "Should the military adopt the Joint Operation Planning Process as the planning model employed by all operational level commanders and staffs?" Secondary research questions include, "When compared with the MDMP, NPP, JAEP and the Marine Corps Planning Process (MCPP), can the JOPP be substituted and arrive at the same outputs and products at the operational level? What modifications to the JOPP are necessary for adoption as the directed planning model? Are multiple planning models a source of friction?"

<u>Assumptions</u>

My initial assumption is that there is little substantive reason for multiple planning models. All planning models follow a generally scientific approach to producing a plan and must accomplish similar tasks. Therefore, I assume a single planning model can be adopted which would meet all of the services' requirements with respect to planning and publishing an order or plan. This assumption forms the basis of my thesis.

Similarly, I assumed there was a reason that the services have different planning models. More specifically, I assumed there was some requirement by the Navy to do something 'different' or 'special' because the Navy operates at sea, which would be reflected in a difference in its planning model.

My next assumption is the current, existing planning models, such as the JOPP as listed in JP 5-0, are an adequate method for arriving at decisions necessary to prepare and execute full spectrum operations. Each of the planning models must accomplish certain tasks in achieving a well developed plan. The planning models must collect data, analyze the data, determine the problem, generate possible solutions, test the solutions, determine which solution to implement, and then publish a plan or an order. This assumption is important, because I do not plan to investigate the validity of the planning models as presented by any of the military services.

Given an assumption of the validity of the different planning models, then a follow-on assumption is that a planning model already exists which can be used by all of the services as the base model. This becomes important when trying to convince the services to change from their current, individual models to a single model. This is also

important because I do not have to create a new planning model, but can modify an existing model to ensure it accomplishes all of the tasks that a specific service requires.

I also assume that a single planning model can be employed across the strategic and operational levels. This assumption is important because I intend to use the JOPP, created for use at the strategic and higher-end of the operational level, as the planning model which would be mandated for use at the operational level. If this assumption proves false, an obvious follow-on question becomes, "At what levels can a singular decision making model be employed?"

Another assumption in preparing this thesis is that friction exists between the planning models. This friction that I assume exists limits the effectiveness of the staffs and the individual officers who are attempting to use the planning models. This friction exists either in the ability of the staffs to communicate with each other effectively, or in the disruption of higher headquarters to subordinate headquarters communication based on parallel planning and the time used in working through the planning process.

Definition of Terms

When considering a planning model, I refer specifically to the process by which the staff of any military service initiates planning, analyzes a mission, develops possible courses of action, decides on a course of action and then produces a plan or an operations order. While I refer to this as a planning model, each of the services titles the process differently. For the joint staff, the Navy and the Marine Corps, it is a planning process; for the Army a decision making process; and for the Air Force an estimate process. Regardless of the official title, I collectively refer to the processes as planning models.

Joint Operations Planning Process (JOPP) [Joint]: "An orderly, analytical process that consists of a logical set of steps to analyze a mission; develop, analyze, and compare alternative courses of action against criteria of success and each other; select the best course of action; and produce a joint operation plan or order. Also called JOPP."

Military Decision Making Process (MDMP) [Army]: "The military decision making process is a planning model that establishes procedures for analyzing a mission, developing, analyzing and comparing courses of action against criteria of success and each other, selecting the optimum course of action, and producing a plan or order. The MDMP applies across the spectrum of conflict and range of military operations.

Commanders with an assigned staff use the MDMP to organize their planning activities, share a common understanding of the mission and commander's intent, and develop effective plans and orders."²

Navy Planning Process (NPP) [Navy]: "Through the NPP, a commander can effectively plan for and execute operations, ensure that the employment of forces is linked to objectives and integrate naval operations seamlessly with the actions of a joint force. Accordingly, the terminology, products, and concepts in the NPP follow the joint planning process, adhere to joint doctrine, and are compatible with other services."

Joint Air Estimate Process (JAEP) [Air Force]: "The Joint Air Estimate Process is a six-phase process similar to other joint estimate models ... that culminates with the production of the JAOP [Joint Air Operations Plan]."⁴

Marine Corps Planning Process (MCPP) [Marine Corps]: "The Marine Corps Planning Process helps organize the thought processes of a commander and his staff throughout the planning and execution of military operations. . . . The Marine Corps

Planning Process is applicable across the range of military operations and is designed for use at any echelon of command."⁵

Intelligence preparation of the battlespace (IPB), intelligence preparation of the operational environment (IPOE), joint intelligence preparation of the operational environment (JIPOE): Throughout the doctrinal publications, there was a shift in how the military referred to the area in which operations were conducted. Originally referred to as battlespace, the term is now operational environment. Based on the different revisions of doctrinal publications, the terms IPB, IPOE, and JIPOE are used interchangeably in this thesis, and refer to, "An analytical methodology employed to reduce uncertainties concerning the enemy, environment and terrain for all types of operations." 6

Limitations

While this study attempts to gain some understanding of how the services arrived at their selected planning models in order to determine if there are substantive differences, this study is not meant to be an in-depth analysis of the development of planning models. Therefore, I limited the depth with which I researched the planning models' history.

Scope and Delimitations

This study will not consider the validity of any of the planning models with respect to whether the models arrive at a high quality plan or decision. This study will not attempt to create a new planning model, but will look for similarities that will allow the combination of models or the adoption of an existing model which will allow all of the services to use the same planning model. This study will not consider the automation

systems involved in conducting different planning models, and specifically will not consider Joint Operational Planning and Execution System (JOPES) from an automation, information technology perspective.

Significance of the Study

As written in the National Military Strategy of the United States of America, we are continuing to improve the joint professional military education to provide more joint experiences, education and training to warfighters – junior and senior officers and noncommissioned officers. The a single planning model can be tailored to accomplish all of the requirements of each service, and the decision to adopt a single planning model is made, then many of the doctrinal publications must be rewritten. Additionally, the officer professional education system for all of the services will also have to be altered to incorporate education in a single planning model. Despite these doctrinal changes and the effort involved by each of the services to make the physical changes, the adoption of a single planning model should greatly increase the abilities of the services to operate in a joint environment. As the military continues to field joint staffs and encourages the services to think jointly, a single planning model would provide a common frame of reference. Thorough training on the model, conducted earlier in the officers' careers would reduce friction when the officers revert to what they learned as part of a new, joint staff later in their careers. It would also better facilitate the synchronization of sisterservice liaison officers attached to service-specific headquarters.

This chapter introduced the purpose of this thesis and the research questions which I will investigate throughout the remainder of this thesis. The second chapter will review the important literature which already exists on the use and potential changes to

planning models. The third chapter will discuss the methodology I developed in order to proceed with my analysis, while the fourth chapter will discuss my findings throughout the conduct of the research. Finally, the fifth chapter shows my conclusions and recommendations based on my findings.

¹ U.S. Department of Defense, Chairman of the Joint Chiefs of Staff, Joint Publication 5-0, *Joint Operation Planning*, (Washington, DC: Government Printing Office, 2006), GL-15.

² U.S. Department of the Army, Field Manual 5-0, *Army Planning and Orders Production*, (Washington, DC: Government Printing Office, 2005), 3-1.

³ U.S. Department of the Navy, Office of the Chief of Naval Operations, United States Marine Corps, Naval Warfare Publication 5-0,1 *Navy Planning*. (Washington DC: Government Printing Office, 2007), 1-3.

⁴ U.S. Department of Defense, Chairman of the Joint Chiefs of Staff, Joint Publication 3-30, *Command and Control for Joint Air Operations*, (Washington, DC: Government Printing Office, 2003), III-4.

⁵ U.S. Department of the Navy, Office of the Marine Corps Combat Development Command, Marine Corps Warfighting Publication 5-1, *Marine Corps Planning Process*, (Ouantico, VA: Marine Corps Combat Development Command, 2000), 1-2.

⁶ U.S. Department of Defense, Chairman of the Joint Chiefs of Staff, Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*, (Washington, DC: Government Printing Office, 2001), 270.

⁷ U.S. Department of Defense, *National Military Strategy of the United States of America*, Reprinted in Department of the Army, US Army Command and General Staff College, C200, Strategic Studies: National Strategy Documents (Washington, DC: Government Printing Office, 2004), 26.

CHAPTER 2

LITERATURE REVIEW

The literature currently breaks out into two primary topics. First, the current doctrinal publications produced by the military provide the description and definition of each of the existing planning models. The other topic, provided primarily by the journals and earlier theses, examine work that authors have done with respect to the validity of the current decision making models and previous attempts at combining the decision making models. At the end of this review of literature, I will also introduce the officers and civilians I interviewed in the conduct of this thesis.

Doctrinal Publications

The military doctrinal publications regarding the planning processes explain in detail the steps of the planning models, the anticipated or required inputs to each step, the process used in each step, and the anticipated output of each step in the planning model. Each of the services and the Chairman of the Joint Chiefs of Staff have published the doctrine governing these planning models, and I will introduce each of these publications below.

Joint Publication (JP) 5-0 lists the seven steps of the JOPP and the sub-steps therein. Although the first and last steps of the JOPP do not have clearly listed inputs and outputs for the steps, the remaining steps include this description. As I explain in chapter three, JP 5-0 and the JOPP provide the structure I will follow throughout most of my thesis.

Army Field Manual (FM) 5-0, governs the MDMP for the Army. While the seven steps in the MDMP are discussed thoroughly in FM 5-0, only the first five steps of the process have clearly listed inputs and outputs as well as the process for each step. Additionally, the doctrine clearly states that following the MDMP leads Army planners through an analytical approach to decision making. I have not found a document which explains why the Army chose seven steps for the MDMP or what other possibilities the Army explored before adopting the MDMP. Given the evolutionary approach to revising staff manuals, however, this analysis may be difficult to determine.

Naval Warfare Publication (NWP) 5-01 is significant for this study because in the opening statement of the publication it demonstrates the design of the NPP for use at the operational level of planning. "Navy Planning, NWP 5-01, represents a significant step toward the Navy's goal of improving tactical and operational level planning skills and processes within the maritime and joint domains to better support the Navy's contribution to the operational level of war." In the foreword, the president of the Naval War College goes on to explain that the publication is intended for commanders and staffs functioning at any echelon. Similar to the Army's FM 5-0, the NWP 5-01 lists in detail the steps of the planning process. Also significant for looking at the NPP is NWC 4111G, Commander's Estimate of the Situation, Instructional Workbook for In-Class Work / Wargaming, which was published by the Joint Military Operations (JMO) Department of the Naval War College in 2004. This book was used to instruct students in the Commander's Estimate of the Situation (CES) process. The CES was a predecessor to the NPP. The NPP was published in 2007 with very little changes from the CES, and

the NWC4111G provided insight into the details of the sub-steps of the NPP, which facilitated my comparison of the NPP to other planning models.

Although Air Force Doctrine Document 2 (AFDD 2), *Operations and Organization*, describes in some detail the JAEP, JP 3-30 publishes the JAEP as the Air Force's operational level planning process. The JAEP is used by the Air Force, the Navy and the Marine Corps with specific respect to the employment of JFACC assets in support of the JTF commander's intent. The product of the JAEP is the Joint Air Operations Plan (JAOP). As described in JP 3-30, the JAOP is used to coordinate and synchronize all aspects of the JFACC's intent. This JAOP leads to the creation of several subordinate plans which ultimately become the daily Air Tasking Orders (ATO) and Airspace Control Orders (ACO). In addition to JP 3-30 and AFDD 2, the Joint Air Estimate Planning Handbook lays out the Air Force's decision making model in detail in an instructional format. Written for the Joint Air Operations Planning Course student, the text clearly indicates the use of the JAEP for planning at the operational level of war. These texts list in detail the six steps in the JAEP which are very similar to the JOPP and the Army's MDMP.

Even within its own service doctrine, the Marine Corps seems to create friction concerning the use of different planning models depending on whether the Marine commander is serving as a JTF commander or a Marine Corps service component commander. Marine Corps Warfighting Publication (MCWP) 5-1, *Marine Corps Planning Process*, when discussing the use of the MCPP, states, "When designated as a joint force commander or when preparing a supporting plan in a campaign, a Marine commander and his staff will use the joint planning procedures and the Joint Operation

Planning and Execution System (JOPES) found in the Joint Pub 5 series."² Again, this would seem to indicate that adoption of a single planning model would preclude the need to be able to move between models at the operational level of war. Regardless, MCWP 5-1 provides a description of each step in the MCPP, as well as the required and optional inputs and outputs to each phase.

Journal Articles and Theses

Most of the literature described in articles and theses presented for other projects tends to indicate a recognized need to move toward a single planning process. As a general rule, the authors of all of the articles I researched proposed combining planning processes or moving to the JOPP. Two of the articles, as discussed individually below, indicate that the planning processes currently used are valid models. This would support one of my assumptions that the models arrive at a good decision, and it would seem to indicate that a single planning model can be adopted.

A proposal to move to a single planning process was published by Army Colonel Joseph Anderson and Army Colonel Nathan Slate in "The Case for a Joint Military Decision-making Process", published in *Military Review* in September - October 2003. Colonel Anderson and Colonel Slate demonstrate that it is conceptually possible to adopt a single planning process. However some of the facts have changed regarding their discussion. Specifically, the Air Force has recently codified the, "… rather eclectic mixture of existing approaches to the process." Additionally, their study seems to lack some of the detail I sought in this thesis.

Air Force Major Christopher Valle, in *Toward A Single, Integrated Planning and Execution System*, made an argument for the Air Force to move to a Joint Operational

Planning and Execution System (JOPES) based system. Major Valle recognized that even within the Air Force, there were divergent planning models which possibly created confusion. However, Major Valle's primary concern was how a specific piece of data, a Unit Type Code (UTC) was entered correctly or incorrectly into the Time-Phased Force and Deployment Data (TPFDD). He did not really address the planning models that are used to drive the JOPES.

Army Major David Burwell, in *Logical Evolution of the Military Decision*Making Process, accomplished two key goals for this thesis. First, Major Burwell demonstrated that the MDMP is a valid process given that its focus is on a rational decision making model. Although he argued throughout his essay that a recognition based model, a more intuitive decision making model, is more relevant, he did not dispute that the MDMP accomplishes valid decisions given its constraints. Secondly, Major Burwell commented, "Because of the deficiency in Joint Doctrine, it is logical that a U.S. Army planner, for example, operating in a JTF Headquarters will utilize the only decision making process that the planner is familiar with – the MDMP." As Major Burwell pointed out, officers will tend to stay with the planning models they are accustomed to using based solely on their experience and familiarity with the models. In order to be more joint in our efforts at military planning, Major Burwell indicated we need to all learn to use a single system.

Major Kenneth Smith, in a School of Advanced Military Studies (SAMS) monograph in 1999, proposed that the Army should move to the JOPP in order to continue to be more joint. He carefully considered the validity of the decision making models in order to confirm that they arrive at 'good' decisions.

Air Force Major David Drichta in *The Applicability of the Military Decision-Making Process in the Air Operations Center* established a lack of Air Force doctrine which governs planning, at least with the detail that Army FM 5-0 governs the MDMP. "The closest that the US Air Force comes to replicating the fidelity of the US Army's MDMP is the TTPs outlined in AFOTTP 2-3.2, *Air and Space Operations Center*, 14 December 2004." Major Drichta also says that through standardization between the Army and Air Force planners, high turn-over rates in planning positions can be mitigated with a common planning model.

Interview Candidates

I began locating interview subjects for this thesis by consulting with members of my MMAS committee. Through the committee's input, and the follow-on interviews that I arranged through my initial interviews, I interviewed a total of eight individuals.

Described here in the order in which I conducted the interviews are the names of those individuals I interviewed, and their qualifications as they pertains to this thesis.

Lieutenant Colonel James Tweet, a member of my MMAS committee, recommended I interview Air Force Colonel (retired) Matthew Neuenswander. Mr. Neuenswander currently works as the Air Force doctrine education officer to the Army's Combined Arms Doctrine Directorate (CADD) at Fort Leavenworth, Kansas. Among Mr. Neuenswander's experiences is significant use of the JAEP as a member of the Central Air Force (CENTAF) planning staff during planning for and execution of the first part of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF).

Dr. Stephen Coats, also on my MMAS committee, put me in touch with Army Colonel (retired) Clinton Ancker. Mr. Ancker is currently serving as the chief of CADD.

CADD is responsible for the publication of all Army doctrine, and specifically the most recent changes to FM 5-0.

I also contacted Army Colonel James Klingaman, currently serving as a regional embedded training team, team chief in Afghanistan. Colonel Klingaman served on the Combined Force Land Component Commander (CFLCC) staff as the chief of future operations (C35) and was dual-hatted as the Army Central Command (ARCENT) C35 during OIF. Colonel Klingaman has recent operational experience with the JOPP and the MDMP and provided a perspective on the friction between the planning models.

Through Mr. Neuenswander, I contacted Air Force Colonel (retired) Dale Shoupe.

Mr. Shoupe is currently an assistant professor at the Air War College in Maxwell Air

Force Base, and has significant experience with the JAEP as a CENTAF planner for OIF

and OEF.

Mr. Russell Crumrine, the third member of my MMAS committee, put me in touch with Navy Captain (retired) Jeffrey Fullerton. Mr. Fullerton is currently a professor at the Naval War College in Newport, Rhode Island. Mr. Fullerton's experience at the operational level includes working as a J3, J4, and Joint Planning Group (JPG) planner for US Central Command (CENTCOM). Mr. Fullerton also served as the Joint Force Maritime Component Commander (JFMCC) liaison officer for 7th Fleet.

Mr. Crumrine also helped me contact Army Colonel (retired) Patrick Sweeney.

Mr. Sweeney is a Professor of Joint Military Operations at the Naval War College. Mr.

Sweeney is the primary author for the Navy planning documents. Additionally, Mr.

Sweeney graduated SAMS at Fort Leavenworth, Kansas, in 1988, and served in a few joint planning billets. His most recent planning assignment was as the lead planner for

Allied Force in Bosnia during which he also became a lead planner in support of operations in Kosovo.

Mr. Ancker helped me contact Mr. John Bass, who put me in touch with Marine Corps Lieutenant Colonel James Desy. Lieutenant Colonel Desy is currently the operations officer for the Marine Air Ground Task Force (MAGTF) Staff Training Program (MSTP), the Marine Corps' equivalent of the Battle Command Training Program. Lieutenant Colonel Desy's operational experience includes seven months in the J5 section as the JPG chief for Combined Joint Task Force Horn of Africa in 2003, and as a liaison officer from II Marine Expeditionary Force to an operational level headquarters for six months during OIF.

Finally, I interviewed Army Major Geoffrey Fuller. Major Fuller is serving as the operations officer (S3) for 2nd Battalion, 7th Infantry Regiment, in the 3rd Infantry Division. Although Major Fuller is serving in a tactical unit and this thesis is focused at the operational level of planning, Major Fuller and his battalion are attached to the 2nd Marine Regiment in the Al Anbar province of Iraq. While not germane to an operational level planning analysis, I thought Major Fuller might be able to comment on the friction between his training and use of the MDMP as compared to his higher headquarters use of the MCPP.

In the first chapter of this thesis, I introduced the topic and the scope of the work that I was conducting. Having now completed a discussion of relevant literature available as well as an introduction to the officers I interviewed to gain a better understanding of the planning models and their interaction, I will now review the research methodology I used to continue my analysis of the planning models. Following

the research methodology, I will discuss my findings and then present a conclusion to my thesis.

¹ U.S. Department of the Navy, *Navy Planning*, 1-23.

² U.S. Department of the Navy, *Marine Corps Planning Process*, 1-2.

³ Joseph Anderson and Nathan Slate, "The Case for a Joint Military Decisionmaking Process", *Military Review* 83, no. 5 (September – October 2003), 11.

⁴ David Burwell, *Logical Evolution of the Military Decision Making Process*, (Army Command and General Staff College, Fort Leavenworth, Kansas, School of Advanced Military Studies, 2001), 38.

⁵ David S. Drichta, *The Applicability of the Military Decision Making Process in the Air Operations Center*, (Army Command and General Staff College, Fort Leavenworth, Kansas, School of Advanced Military Studies, 2006), 11.

CHAPTER 3

RESEARCH METHODOLOGY

Until I started researching this thesis, I assumed that the Army's "Military"

Decision Making Process was used by all of the services, not just the Army. Therefore, the initial part of the research methodology was to determine the different planning models that are currently employed throughout the US military. Having determined the five different planning models that are used throughout the military, the question then became whether there are substantive differences between the planning models or simply differences within the names. I selected the JOPP as the base planning model and compared each of the other planning models to the JOPP based on a number of assumptions.

My first key assumption was that all of the planning models accomplish the same goal. As a rational decision making process, all of the planning models must define the problem, gather information, generate solutions, test the solutions, and then answer the problem. My next key assumption was that all of the planning models were valid, and therefore I simply had to select a model to use as the basis for comparison. I selected the JOPP as the base model because it was selected for use and approved by the Chairman of the Joint Chiefs of Staff for use by all of the services.

I then began a step-by-step comparison of each of the planning models to the JOPP. Within each step of the JOPP, the inputs, processes, and outputs for each of the different planning models were examined. The goal of this examination was to determine what substantive differences between the planning models existed. If a significant difference was identified between the steps in the different planning models, the

examination continued to determine if this difference was somehow prohibitive for the specific planning model. For example, the first step in the JOPP is initiation. The NPP begins with mission analysis. Therefore, the NPP and the JOPP were further examined to determine if there was some function in the initiation step of the JOPP that was ignored by the NPP, or whether those same functions are performed in other steps of the NPP.

Having determined that very few substantive differences exist between the planning models, I attempted to understand why the different planning models were created or if there was a specific service requirement that insisted on a different planning model. I anticipated a historical analysis of the different models. However, during the interviews I discuss in the following paragraphs, I determined that such a historical examination would not help me to answer my research questions.

After I completed an examination of the published service doctrine on the different planning models, I began to confirm my research through interviewing officers who had worked at the operational level, and officers and civilians who wrote the different service doctrine. I conducted these interviews primarily through email correspondence with the officers and civilians as I determined who I would interview. First, I designed a list of questions for officers who had worked at the operational level to determine whether there is a need to move to a single planning model at the operational level. I then submitted these questions through the Command and General Staff College Graduate Degree Program office, at Fort Leavenworth, Kansas, for approval before conducting the interviews. The questions I intended to ask are listed below. Although by email the questions that I asked were the questions that, for the most part, were answered,

I discovered that in an oral interview the discussion rarely followed the questions that I planned to ask.

The intent of the first list of questions was to establish the experience level and credentials of the staff officer I interviewed, then to determine if they perceived any friction planning in an operational level staff due to employing more than one planning model. Allowing for an opposite hypothesis, and in an attempt not to bias my questions, I also sought to determine if using different planning models was beneficial to ensuring a broader set of alternatives resulting in a well coordinated plan. I will provide transcripts of the interviews I conducted if requested, but these questions served as an initial road map to guide my conversation with the officers.

- 1. Did you have a chance to work at the "operational level" where, when, in what capacity?
- 2. Did your work include working with or employing more than one branch of service? Which branches?
- 3. When planning, which planning model (MDMP, JOPP, JAEP, etc.) did you use? Why? Was it directed? Was it universal throughout the staff?
- 4. What training did you have on employing the planning model?
- 5. Was the model effective?
- 6. Did you see conflicts between planning models? Did this cause friction between the staff or were the points of divergence effective in providing multiple viewpoints and generated better options?
- 7. Would a standardized, trained, rehearsed, singular planning model have helped or hindered the efforts of the staff? Why?

I selected two officers to begin the interview process. First, I contacted Colonel Klingaman, who I introduced in the previous chapter. As a company commander,

Colonel Klingaman was my battalion commander, and I knew he had served as the C35 for CFLCC and ARCENT during OIF and OEF. Also at this point, Lieutenant Colonel Tweet introduced me to Mr. Neuenswander. Lieutenant Colonel Tweet knew Mr. Neuenswander from a previous duty position, knew that Mr. Neuenswander had worked on airpower planning and more specifically that he was currently working on Fort Leavenworth which made initial contact easy. I planned to conduct these interviews with active duty officers to confirm or deny the existence of friction between planning models. Simultaneously, I started to conduct the interviews with doctrine authors described in the next paragraph. I realized that most of the civilians who I planned to interview were experienced, retired military officers who could address all of my questions about working on operational level staffs as well.

I planned to interview civilians who worked as doctrine authors in an attempt to pursue a different focus for this thesis. I was specifically interested in determining how the decision to adopt the MDMP, for example, was reached. I doubted anyone remembered why the MDMP was formalized into a process, and why different models in other services continued to be developed. However, I thought some of the doctrine authors may have an understanding of how the different models came about based on historical documents or analysis that was not in the current versions of the manuals. At least with specific respect to the Army's planning model, I wanted to interview the doctrine authors at CADD. The questions I planned to ask of these doctrine developers are listed below. Again, the transcripts of the interviews are available if requested:

1. Can you discuss the history behind the MDMP (NPP, etc.)?

- 2. Why did the Army choose the MDMP? Were there competing models that the Army had to choose from, or was the decision simply a formalization over time of a specific set of practices?
- 3. If there were competing models that the Army could select, what models were there?
- 4. Other than some of the logistical issues with respect to teaching and publishing a new decision making model, what challenges would the Army have in adopting a universal planning model over the MDMP?

I started what I thought would become my historical interviews with Mr. Ancker, again because Mr. Ancker worked at Fort Leavenworth, and it was easy to contact him. Mr. Ancker immediately said that he did not know the history of the MDMP and asked why I was interested in this historical view. As I explained to Mr. Ancker my research question, he provided for me a perspective on the friction that I thought I would be investigating throughout my thesis and nearly immediately changed the focus of my thesis. So as I completed this first interview, I determined that the method and the reason a service selected a planning model was truly unimportant. Mr. Ancker then put me in touch with Mr. John Bass a head of doctrine development for the Marine Corps. Mr. Bass then introduced me to Marine Lieutenant Colonel James Desy, currently serving as the operations officer at MSTP.

Having determined that a historical analysis of the MDMP and other service planning models would not help me to address my research question, and having discovered that all of the civilians and retired military officers I planned to interview could also address questions that I intended to ask of active duty officers, I continued my interviews along a primary line of questioning about the ability to overcome that friction through a single planning model. Mr. Neuenswander advised I contact Mr. Shoupe at the

Air War College. As I explained this new approach to interviews to my MMAS committee, Mr. Crumine, a member of my committee, said he could help me contact someone at the Naval War College which led to my interviews with Professor Sweeney and Professor Fullerton.

At this point, I had contacted someone from the Army, Navy, Air Force and the Marine Corps to address the reasons different planning models existed in the military, and to speak to the existence or lack of friction between the models. Also at this point, most of the data I was collecting through the interviews as well as through the journal articles seemed to be communicating the same information. I determined, then, that I had completed the data collection portion of my research, and I began to analyze the data that I collected. I conducted this analysis first by comparing each of the planning models to each other, as is described in chapter four, and then by carefully considering the input from the officers and retired officers I interviewed.

A final interview I planned to conduct was with the doctrine authors who published JP 5-0 which included the JOPP. I wanted to discuss the adoption of the JOPP as compared to an already existing model, again to determine whether the different models provide some kind of specificity to the planning. However, as Mr. Ancker pointed out, JP 5-0 was prepared by a team which was pulled together for that task by the Chairman of Joint Chiefs of Staff, and then the team dissolved. I was unable to find someone who could answer those questions about the JOPP. I do not think, however, that this interview would have significantly altered my conclusion based on the similar responses to the interviews from each of the services.

Having introduced the intent behind this thesis and the relevant literature which has already been published on the topic, I have now discussed the methodology I used when developing and attempting to answer my research questions. The next chapter provides, then, the results of my research. As I complete the findings and results portion of this thesis, I will then provide my conclusions in the final chapter.

CHAPTER 4

FINDINGS AND RESULTS

Organization

In this chapter, I provide the findings and results of my research. I organized this chapter first into a step by step comparison of the planning models. As my primary research question was to determine if the JOPP should be employed by the military as the single planning model at the operational level of war, I used the steps of the JOPP as the primary structural tool to analyze each of the services' planning models. I began each section of this analysis by first identifying the step of the JOPP. As a means for determining the intent of a specific step in the JOPP, I examined the input required for that step, the process that occurs, and then the output for the step. The analysis of each step of the planning models is limited to how each of the service's doctrinal publications discusses the steps within the process. I then addressed how each of the services accomplishes the same task or step in the process. I concluded each section by addressing the differences in the planning models and based on those differences whether I think the planning models can be combined. There are eight sections within this chapter devoted to examining each of the steps of the different planning models.

Following this examination of the planning models, I analyzed what changes must be made to the JOPP in order to enable its adoption as the single planning model for the military. I incorporated the results of the interviews, journal articles which I researched and my interpretation of what this data indicates. I also specifically focused on whether it is feasible to make the changes required to adopt the JOPP as the planning model.

Finally, at the end of this chapter, I examined the question of whether the military should adopt the JOPP as the single planning model. I primarily examined the results of the interviews and my interpretation of what those interviews indicated in order to conduct this examination. I deliberately separated this chapter into three examinations because as I will demonstrate, although it is technically possible to adopt the JOPP as the single planning model, there is no impetus for initiating such a change.

Planning Model Comparison

In order to make the comparison of each of the planning models less tedious, I created the table attached in Appendix A.¹ This table lists the steps of the JOPP at the top, and then each of the other planning models below. At the bottom of this table are the differences between the models. Although this table does not provide any of the analysis of the differences of the models, it does provide an easily understood summary of those differences. Also displayed in Appendices B through F are a series of figures which display the JOPP, MDMP, NPP, JAEP, and MCPP. I copied these figures from the appropriate doctrinal publications. When included in the services' publications, I also included the figures which further illustrate the steps of each of the planning models. On the following page is an illustration of the names of the different steps which demonstrate how the steps of the JOPP coincide with each other.

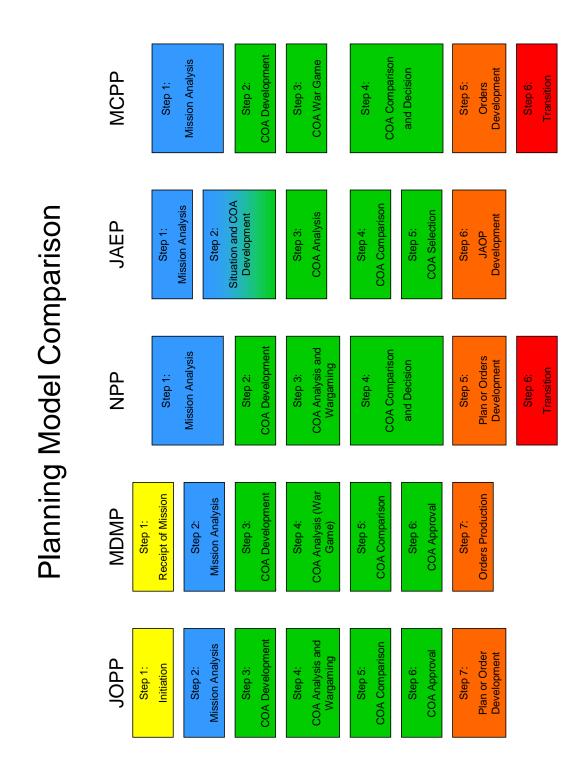


Figure 1. Planning Model Comparison Source: Based on a figure from Lt Col Desy, MSTP Operations Officer, received 26 February 2008.

JOPP Step 1 - Initiation

The first step of the JOPP is initiation. At the strategic level, this step begins when it becomes apparent that military force may be necessary, or when combatant commanders receive a directive to start planning. During the initiation phase, the planning staffs rarely have specific inputs. They consider, however, the existing contingency plans, staff estimates and intelligence products which are available. This step of the JOPP primarily produces commander's initial guidance. This guidance explains time constraints, initial coordination requirements, may authorize movement of key capabilities within specific authority, and may direct other actions.

The Army's MDMP has a very similar first step, receipt of mission. "The MDMP begins with receiving or anticipating a new mission." The inputs for this step in the MDMP are a mission from a higher headquarters or deduced by the command and staff, and higher headquarters orders or warning orders. Receipt of mission alerts the staff to prepare to conduct MDMP. The staff then updates staff estimates and performs an initial assessment. The outputs of this step in the MDMP are the commander's initial planning guidance, an initial operational timeline, and a warning order to subordinate units.

The NPP, JAEP and MCPP do not have a formal step equivalent to the first step of the JOPP. The first step for these three planning models is mission analysis. The planning staffs from NPP, JAEP and MCPP receive a directive or order from the higher headquarters and begin the planning process. Also specifically lacking in the NPP, JAEP and the MCPP are comments similar to the JOPP and the MDMP which indicate that a commander can initiate a planning process without a directive.

This step in JOPP and the last step in the NPP and MCPP are the most divergent steps between the planning models. Only the MDMP and JOPP begin the process with a step prior to mission analysis. The importance of this step for the MDMP is the publication of a warning order to alert subordinate headquarters of an impending mission. Although often conducted as a matter of course, at no place in JOPP is a warning order required for subordinate headquarters.

JOPP Step 2 – Mission Analysis

The second step of the JOPP is mission analysis. According to JP 5-0, "The primary purpose of mission analysis is to understand the problem and purpose of the operation and issue appropriate guidance to drive the rest of the planning process." JP 5-0 breaks mission analysis into 15 sub-steps, many of which occur simultaneously by different staff organizations. These sub-steps of the mission analysis phase of the JOPP consider four key inputs: higher headquarters planning directives, strategic guidance, initial staff estimates, and the joint intelligence preparation of the operational environment (JIPOE). Through the process of mission analysis, the staff produces a restated mission statement, a Joint Force Commander's (JFC) initial intent statement, the JFC's planning guidance, and an initial list of commander's critical information requirements (CCIR).

Step two of MDMP is also mission analysis. The inputs for this step are the higher headquarters plan and IPB, the initial commander's guidance, and updated staff estimates. There are 15 sub-steps in the mission analysis phase. "Both the process and products of mission analysis help commanders refine their situational understanding and determine their mission." The process and sub-steps of the mission analysis in the

MDMP accomplish the same tasks as the JOPP mission analysis. There are eight outputs to the mission analysis: updated staff estimates and products; initial IPB; mission analysis briefing; restated mission; initial commander's intent; commanders planning guidance; an updated operational timeline; and a warning order. Specifically lacking within the MDMP is an analysis of centers of gravity (COGs). The MDMP uses decisive points in place of COGs. A decisive point is, "a geographic place, specific key even, critical system, or function that allows commanders to gain a marked advantage over an enemy and greatly influence the outcome of an attack." The determination of decisive points is initiated in mission and analysis and completed in COA development.

The first step in the NPP is mission analysis. As in the JOPP, the intent of the mission analysis is to provide a clear understanding of the overall situation in order to develop friendly courses of action. NPP accomplishes this through a thorough IPOE.

The NPP mission analysis is very similar to the JOPP mission analysis. The inputs to the mission analysis are higher headquarters' plans, orders and guidance; intelligence products; staff estimates; and the Navy commander's initial guidance. There are 16 substeps in the mission analysis. Key differences between the JOPP and the NPP with respect to mission analysis sub-steps are a lack of a specific task to review strategic communication guidance (when available) and the lack of a specific task to prepare initial staff estimates. The NPP contains two tasks that are not clearly contained in the JOPP: determine the sources of the mission and determine the "supported" and the "supporting" commanders. The outputs of the mission analysis step are usually provided in a mission analysis briefing, and include an approved mission statement, commander's planning

guidance, commander's intent, commander's critical information requirements, and a warning order.

The first step in the JAEP is mission analysis. Staff estimates are generated in this phase of the JAEP, and continuously updated throughout the rest of the planning process. Facts and assumptions, specified, implied and essential tasks are determined in this phase of the JAEP, as is a careful analysis of all of the air forces present and their capabilities. As the JFACC staff continues to conduct this phase of the JAEP, the staff presents the mission analysis to the commander. In the mission analysis brief, the staff presents an initial mission statement to the commander. This step concludes with an approved mission statement, an initial commander's guidance, and may include an articulation of where the commander is willing to accept risk. While the staff conducts an initial IPB during this phase of the JAEP, it is a comparatively reduced IPB. "During mission analysis, IPB focuses on those broad aspects of capabilities, intentions, and the environment. IPB must identify adversary and friendly centers of gravity (COGs) (strategic and operational)."

Mission analysis is the first step in MCPP. "Its purpose is to review and analyze orders, guidance, and other information that is provided by higher headquarters in order to produce a unit mission statement." The inputs to the process include the commander's battlespace area evaluation, commander's initial guidance, a warning order or operation order from the higher headquarters, constraints or restraints, and the higher headquarters intelligence and IPB products. There are twenty sub-steps in the MCPP mission analysis phase. The list of these sub-steps show six differences between the JOPP and the MCPP. However, three of these differences; prepare and define IPB

products, refine the area of interest and the area of influence, and determine constraints and restraints, are contained within the sub-steps of the JOPP. Three of the steps which are not clearly found in the JOPP are to identify subject matter expertise shortfalls, identify requests for information, and to draft a warning order. The outputs for MCPP mission analysis are a larger list than that published in the JOPP mission analysis, but both include certain key pieces. Both the JOPP and the MCPP list a mission statement, commander's intent and commander's planning guidance as the outputs to the mission analysis. MCPP goes on to list 12 additional outputs which are mostly the information generated during the mission analysis process and, although not explicitly listed in the JOPP, exist for the staff to use in the following phases of both planning models. MCPP also lists a warning order as part of the 12 additional outputs, which is a significant difference between the planning models.

Essentially, there are no significant differences in the conduct of mission analysis between the MDMP, NPP, MCPP and the JOPP. Most of the words and the terms used in the planning models match up near exactly. Surprisingly, the JAEP is the most divergent from the JOPP with respect to mission analysis. Although before I began this thesis I anticipated a significant difference in the way the NPP approaches mission analysis, the NPP is very similar to the JOPP, MDMP, and MCPP. The JAEP, however, conducts the IPB over two phases of the estimate process.

JOPP Step 3 – Course of Action Development

The third step of the JOPP is course of action (COA) development. Conveniently, the inputs to the COA development step of the JOPP are the outputs to the mission analysis step: joint force commander's planning guidance, JFC's initial intent, initial

staff estimates, and the JIPOE. The COA that is developed will address the types of military action and their purpose, when and where the action will be conducted, how the action will be accomplished, and the purpose of pursuing the action. Generally, the staff prepares more than one COA. The staff also checks the COA to ensure that it is valid in that it is adequate, feasible, acceptable, distinguishable and complete. The outputs of the COA development step in the JOPP are revised staff estimates, and the COAs themselves. The COAs include tentative task organization, deployment concept and sustainment concept.

The third step of the MDMP is also COA development. The inputs for this step in the MDMP are a restated mission, commander's intent, commander's planning guidance, initial CCIR, updated staff estimates and the enemy COAs. The six sub-steps in COA development provide a COA which can defeat all feasible enemy COAs. "In a totally unconstrained environment, the goal is to develop several possible COAs. Since there is rarely enough time to do this, commanders usually limit the options in the commander's guidance." The six sub-steps in the process are to analyze relative combat power, generate options, array initial forces, develop the concept of operations, assign headquarters, and develop COA statements and sketches. The outputs to the COA development are updated staff estimate, COA statements and sketches, a COA briefing, and refined commander's guidance.

The corresponding second step of the NPP is COA development. The inputs for this step are the higher headquarters warning order or operations order; and the mission statement and intent, planning guidance, updated IPOE, and enemy courses of action as developed during the mission analysis. The process involved in this step includes

analyze relative combat power, generate COA options, test for validity, recommend command and control relationships, prepare COA statements and sketches, prepare the COA briefing, and develop COA analysis and evaluation guidance. As with all of the other planning models, the NPP tests the validity of the COA. "This test should address suitability, feasibility, acceptability, distinguishability and completeness." The outputs for this step of the NPP are the approved COAs, refined enemy COAs, wargaming guidance, evaluation criteria and initial staff estimates.

This step in the planning process corresponds to the second step of the JAEP, situation and COA development. This step begins by refining the initial IPB conducted in the previous phase of the JAEP. Important within this portion of IPB for the JAEP is the completion of the analysis of COGs, the decisive points, the adversary's force structure and courses of action, and the domestic and societal factors which influence friendly courses of action. The staff then creates courses of action which include, at a minimum, the JFACC's mission, desired endstates, the JFACC's intent, CCIR, theater command and control structure, essential tasks, available logistics support, available forces, and available support from agencies. "COAs should address who, what, when, where, how and why joint air operations will be conducted and include the following specifics:

- Operational and tactical objectives and their supporting tactical tasks, in the order of accomplishment.
- Forces required and the force providers.
- Force projection concept.
- Employment concept.
- Sustainment concept."¹³

The JAEP allows the JFACC to determine the number of COAs to be developed based on the time available, as do all of the planning models, and uses the same requirements to ensure the COA is valid. The output of this phase of the JAEP is at least two valid COAs.

The second step in MCPP is course of action development. The inputs to this step of MCPP are the outputs of the mission analysis step, which include at a minimum an approved mission statement, commander's intent and commander's planning guidance. The COA development step of MCPP has nine sub-steps. The intent of the COA development step is to generate options for follow-on wargaming and comparison that satisfy the mission, commander's intent, and the commander's guidance. ¹⁴ As in all of the planning models, the COA development criteria must ensure that each COA is suitable, feasible, acceptable, distinguishable and complete. MCPP allows the commander to determine the number of COAs to be developed, and recognizes that the number of COAs may be limited when the staff is operating under severe time constraints. MCPP lists three required and five additional outputs to the COA development process. The three required outputs are the COAs for wargaming, commander's guidance for wargaming, and commander's evaluation criteria. The listed optional outputs of COA development phase are updated IPB products, planning support tools, estimates of supportability from subordinate commanders, and updated staff estimates.

JOPP, MDMP, NPP, JAEP and MCPP all develop COAs and test the developed COA against the criteria of suitable, feasible, acceptable, distinguishable and complete. The JAEP is a considerable outsider during this phase as it continues the IPB from the

previous phase and specifically completes the analysis of COGs in this step of the process. Another difference in the planning models, the NPP is much more commander intensive than the other planning models with a significantly greater focus on the commander's decisions and guidance throughout the process. However, development of COAs is very similar in all of the planning models.

JOPP Step 4 – COA Analysis and Wargaming

The fourth step in the JOPP is COA analysis and wargaming. During this step, the staff and the commander analyze each COA separately. Here also, the inputs to the COA analysis and wargaming are the same as the outputs of the COA development step: revised staff estimates and COA alternatives. Part of the outcome of the analysis of each COA should reveal the following eight factors:

- Potential decision points
- Task organization adjustment
- Data for use in a synchronization matrix or other decision-making tool
- Identification of plan branches and sequels
- Identification of high-value targets
- A risk assessment
- COA advantages and disadvantages
- Recommended CCIRs¹⁵

Given time, a commander attempts to wargame each COA against the enemy most probable and most dangerous COA as identified in the JIPOE. Wargaming is an attempt to make the analysis objective and comprehensive as the flow of the operation is visualized. While there are no prescribed sub-steps for wargaming, the types of wargames conducted vary from a narrative approach to a sophisticated, computer aided model of the COA. Wargaming is typically conducted with an action, reaction, counteraction approach. A specific tool listed in JP 5-0 for recording the results of the

wargame is a synchronization matrix, which facilitates recording decision points, potential governing factors, CCIRs, adjustments or branches and sequels to the COA. The outputs of the COA analysis and wargaming step are potential decision points, governing factors, potential branches and sequels, refined COAs, and revised staff estimates.

The fourth step in the MDMP is COA analysis. This step within the MDMP is also referred to as wargaming. "COA analysis allows the staff to synchronize the BOS [battlefield operating system – now referred to as the war fighting functions] for each COA and identify the COA that best accomplishes the mission." The inputs to this step of the MDMP are staff estimates, IPB, COA statement and sketches, and supporting staff functional COAs. The eight sub-steps to COA analysis are to gather the tools, list all friendly forces, list assumptions, list known critical events and decision points, determine evaluation criteria, select the war game method, select a method to record and display results, and wargame the battle. As with the JOPP, the MDMP usually uses a synchronization matrix to record the results of the war game. The only formal output to this step is the war game results. However, listed under the war game results and therefore an output of this step in the MDMP, are a concept of operations, a synchronization matrix, operations overlay, decision support template, task organization, mission to subordinates, and updated CCIR.

The third step in the NPP is COA analysis (wargaming). NWP 5-01 emphasizes the importance of this step in the process, "The heart of NPP is the analysis of opposing course of action. ... The aim is to develop a sound basis for determining the feasibility and acceptability of the COA." As in the JOPP, the goal of the war game in this step is

to analyze COAs independently. The process is also conducted iteratively, using an action, reaction, counteraction method. The inputs to this step are refined commander's intent, wargaming guidance, approved COAs and refined enemy COAs, and initial staff estimates. The process begins with organizing for wargaming, listing friendly forces available and reviewing assumptions. The process continues by determining the governing factors, selecting a wargaming method, and selecting a method to record and display the results. The NPP proposes the use of a war game worksheet during time constrained planning to record the results of the analysis. With longer planning times, the NPP uses an expanded war game worksheet to record the results of the analysis. The COA analysis continues by wargaming combat action and assessing results, working through the war game process, and then refining staff estimates and IPOE products. The outputs for this process include: war game results (which include a decision support matrix, refined task organization and command and control requirements, identification of required assets and shortfalls, refined CCIRs, and refined TPFDD input if required), list of critical events and decision points, updated IPOE, subordinate commander's estimates of supportability, and branches and sequels identified for further planning.

The third step of the JAEP is also COA analysis. "COA analysis involves wargaming each COA against the adversary's most likely and most dangerous COAs." During wargaming in the JAEP, planners assemble the tools and set the rules to be followed during the wargame. Planners use a synchronization matrix to capture the results of the wargame, which will be used to provide the details in the JAOP. This phase of the JAEP concludes when planners have refined each plan in detail and have identified the advantages and disadvantages of each COA.

The corresponding step in MCPP to the JOPP step four is COA war game, step three. The inputs to this step in MCPP include the developed COAs, commander's wargaming guidance, and commander's evaluation criteria. The five optional inputs are the five optional outputs from the previous MCPP step. The number of sub-steps listed during this step of MCPP is relatively small. The staff conducts the war game, refines staff estimates, prepares a war game brief, and refines IPB products. As in the JOPP, the COAs are wargamed against enemy COAs. "Wargaming pits friendly courses of action against enemy courses of action, it does not compare friendly courses of action against each other." The war game identifies additional tasks, revises both the graphic and narrative COA statement, identifies branches and sequels to the plan, and possible decision points. The minimum outputs to this step in the MCPP are the wargamed COA graphic and narrative, information on the commander's evaluation criteria. Optional outputs to this step in MCPP are updated IPB products, planning support tools, an initial task organization, identification of assets required and shortfalls, refined CCIRs, lists of critical events and decision points, refined staff estimates, subordinate commander's estimates of supportability, and branches and sequels for further planning.²⁰

All of the planning models conduct a wargame to analyze the COAs, and focus the wargame on enemy COAs and not comparing friendly COAs to each other. The planning models all capture the results of the wargame on some form of a synchronization matrix. Although the doctrinal publications of each of the services describe this step differently, there are essentially no differences between planning models with respect to COA analysis.

JOPP Step 5 – COA Comparison

The fifth step in the JOPP is COA comparison. During this step, the COAs are again considered independently from each other, and evaluated against a set of criteria that are established by the staff and the commander. Often employing a decision matrix, the COAs are measured against the governing factors determined during the COA analysis and wargaming. In this step of the JOPP, the inputs are not directly the outputs of the fourth step. The COA comparison inputs are the advantages and disadvantages of each COA, the wargaming results, the governing factors and revised staff estimates. The key outputs of the COA comparison are the evaluated COAs, a recommended COA, the COA selection rationale, and further revised staff estimates.

The MDMP's fifth step is also COA comparison. "The staff may use any technique that facilitates reaching the best recommendation and the commander making the best decision." The inputs to this step are the war game results and the staff estimates. The process has three sub-steps; conduct a COA advantage and disadvantage analysis; compare COAs; and develop a recommended COA. The outputs to this step are a decision matrix and a COA decision briefing.

At this point, the NPP combines two steps of the JOPP. The fourth step of the NPP is COA comparison and decision. The inputs to this step include the governing factors that were used during the analysis in the previous step of the NPP, COA war game worksheet, updated IPOE, decision support matrix, and refined staff estimates. In this manner, then, the NPP compares the results of the analyzed courses of action with each other in order to determine the relative advantages and disadvantages for each course of action. This process includes a COA comparison with each other and a COA

evaluation against the decision criteria. A decision matrix is constructed in order to conveniently compare the courses of action to each other. "After completing its analysis and comparisons, the planning team identifies a preferred COA and makes a recommendation to the commander." Once the commander has selected a COA, the staff then completes this step by generating the required outputs: COA decision, a concept of the operation, updated IPOE, refined staff estimates, and a warning order to subordinate headquarters.

The fourth phase of the JAEP is COA comparison. As in the JOPP, the JAEP seeks to identify the strengths and weaknesses, advantages and disadvantages of each COA, and then uses a decision matrix to compare the COAs to one another. The inputs to this phase are the COAs that were previously analyzed in the JAEP. The staff determines and weights the decision criteria. The output of this phase of the JAEP is a COA that the staff will recommend to the JFACC.

The fourth step in MCPP is COA comparison and decision. As with the NPP, this step in MCPP combines two steps of the JOPP. The two minimum inputs for this phase are the wargamed COA graphics and narratives, and information on commander's evaluation criteria. The nine optional inputs for this phase are the same as the outputs listed for the MCPP COA wargame. "During COA comparison and decision, the commander evaluates all friendly courses of action against established criteria, evaluates them against each other, and selects the course of action that he believes will best accomplish the mission." Specifically also listed as a part of the process for this phase of MCPP is issuing a warning order. The only required output for this step in MCPP is a concept of operations statement. Additional outputs may include an updated IPB,

planning support tools, updated CCIRs, staff estimates, and commander's identification of branches for further planning.

Both the NPP and MCPP combine two steps of the JOPP in this step, the comparison and approval steps. Other than this, all five planning models accomplish the same tasks with respect to COA comparison.

JOPP Step 6 – COA Approval

The sixth step in the JOPP is COA approval. The inputs during this phase of the JOPP are the refined courses of action, the staff recommendation, and the Joint Force Commander's personal analysis. Significantly different in the JOPP as opposed to other services' planning processes, the Joint Force Commander, "...may choose to present two or more valid COAs for approval by a higher authority." The outputs for this step of the JOPP are COA modifications, JFC's COA selection, the commander's estimate (if required), and refined commander's intent. Another difference between the planning models and this step in the JOPP is in the joint process the COA is submitted to a higher headquarters for approval.

COA approval is also the sixth step of the MDMP. This step in the MDMP is relatively small, and focuses on the staff recommending a COA to the commander, usually in a decision briefing. The commander then decides on a COA and issues final planning guidance. This step in the MDMP has no formal inputs or outputs listed in FM 5-0, but the staff issues a warning order to subordinate headquarters once the commander has approved a COA which includes the mission, commander's intent, updated CCIR, concept of operations, the area of operations, principle tasks assigned to subordinate

units, additional guidance on preparation or rehearsals, and the final time line for the operation.

The JAEP lists step five as COA selection. "COA selection begins with a staff recommendation and ends with a JFACC-approved COA and guidance." The staff usually presents the recommended COA to the JFACC in a briefing which includes a summary of the estimate process that led to the recommended COA. This phase is relatively short in the JAEP, as the JFACC simply selects a COA, or directs modification to a COA.

The NPP and MCPP do not have a specific step in the process for conducting COA approval, it is incorporated into the previous step. The combination of COA comparison and COA approval, whether across two steps as published in the JOPP, MDMP, and JAEP, or across one step as published in the NPP and MCPP, essentially accomplish the same process. Compare the COAs to evaluation criteria, compare the COAs to each other, then recommend and gain approval on a COA from the commander.

JOPP Step 7 – Plan or Order Development

The final step of the JOPP is plan or order development. JP 5-0 lists ten plan development activities as indicated in the table at the end of this paragraph. These planning activities typically will be accomplished in a parallel, collaborative and iterative fashion in order to produce a complete plan for execution by subordinate commanders.

Table 1. Plan Development Activities

- Force Planning
- Support Planning
- Nuclear Strike
- Deployment Planning
- Shortfall Identification
- Feasibility Analysis
- Refinement
- Documentation
- Plan Review and Approval
- Supporting Plan Development

Source: U.S. Department of Defense, Joint Operation Planning, 2006, III-42.

The seventh step of the MDMP is orders production. In this step of the MDMP, the COA statements and sketches are converted into a five paragraph operations order or fragmentary order with associated graphic overlays. "If possible, the order is briefed to subordinate commanders face to face by the higher commander and staff." The only output to this phase is the order itself.

The fifth step of the NPP is plans and orders development. "Plans and orders can be detailed written documents with many supporting annexes, or orders may be simple verbal commands." The inputs for this step of the NPP are the task organization, mission statement, commander's intent, concept of the operations statement, and staff estimates. Part of the process of producing an operations order is to conduct an orders reconciliation. "This reconciliation ensures that the basic order and all the annexes, appendixes, etc. are complete and in agreement." The required output is the approved plan or order, a refined IPOE and planning support tools.

The final step of the JAEP is the JAOP development. During this phase, the staff prepares the order which integrates the efforts of the joint air forces and capabilities. The JAOP also identifies objectives and tasks, indicators of success, synchronizes the phasing of air operations, indicates the air capabilities that are required, and develops the

procedures for allocating, tasking, exercising and providing command and control of joint air capabilities.²⁹

Step five in MCPP is orders development. In this step, the inputs are not exactly the outputs of the previous step in MCPP. The five minimum inputs are an initial task organization, mission statement, commander's intent, concept of the operations, and specified and implied tasks. Eight optional inputs are listed, two of which have not been previously identified in the process: existing plans and SOPs; and a chief of staff or executive officer orders development guidance. The process in this phase includes refining IPB products, preparation of the order or plan, conducting order reconciliation and an orders crosswalk, and gaining the commander's approval of the order. Significantly different in this phase of MCPP than in the JOPP is the orders reconciliation and the orders cross walk. During reconciliation, the staff conducts a detailed review of the order to ensure that it is complete and is in agreement with itself. During the crosswalk, the order is compared with the higher headquarters order to ensure the higher commander's intent is achieved, and the order is compared with adjacent commanders' orders to insure there are no discrepancies or gaps. In addition to the minimum output of this step, the order, three optional outputs include a refined IPB, planning support tools, and outlines for fragmentary orders based on necessary branches.

The JOPP deviates significantly from the other planning models in the orders production portion of the process. While the outcome of the process to this point is about the same, JOPP, based on its use at the strategic level, produces several types of orders which direct the use of many different national assets. The other planning models are

more narrowly focused, and produce orders which direct the use of their assets.

However, all of the planning processes produce a five paragraph operations order.

NPP and MCPP Step 6 - Transition

The NPP has a sixth step, transition. "The purpose of transition is to ensure a successful shift from planning to execution. A good transition enhances the situational awareness of those who will execute the order, maintains the intent of the [concept of operations] CONOPS, promotes unity of effort, and generates tempo." This step can be conducted internally, between the plans and current operations section, or externally between one commander and subordinate commands. The transition brief, accompanying back brief by subordinate commands, and rehearsals ensure the plan is understood by subordinates. The inputs for the transition are the operations order, refined IPOE, the outline of potential fragmentary orders for branches of the plan, and information for future missions or sequels. The process is only a transition briefing, drills and a confirmation briefing. The output of this step is simply a subordinate command and staff prepared to execute the order and potential branches.

The MCPP also has a formal transition step as its last step. "The purpose of transition is to provide a successful shift from planning to execution." The inputs to this phase are the outputs of the previous step in MCPP, and any identified or outstanding issues. There are three sub-steps in this step of MCPP. The transition brief is a formal brief of the order to subordinate and adjacent unit commanders, and the staff which will monitor the execution of the order. The second sub-step is transition drills. "A transition drill is a series of briefings, guided discussions, walk through, or rehearsals used to facilitate understanding of the plan throughout all levels of command." The final sub-

step is a confirmation brief, during which subordinate commanders demonstrate that they understand their mission and tasks. The listed outputs of this step in MCPP are subordinate staffs that are both ready to execute the order and possible branches prepared to plan sequels.

No other planning model employs a transition phase as a formal part of the planning model. At least from personal experience, the process that is accomplished during the transition phase is governed by unit standing operating procedure. However, when comparing the models to determine whether a single planning model can be adopted, a requirement to ensure subordinate commanders have received, understood, and are prepared to execute the operations order seems fairly self evident.

Differences Between Models

In order to determine whether it is possible to adopt a single planning model for all of the services, I examined the steps in each of the service models. At this point, I will begin to compare the models and identify what changes to the JOPP would have to occur in order to adopt it as the mandated planning model. In order to do this, I will identify the most significant differences between the planning models. As identified by several of the experts I interviewed, in order to move to a single planning model a common definition of key terms will have to be determined. I do not, however, consider this to be a change as this period of explanation already exists when any of the planning models are used either by a new JTF staff or when moving between staffs. As indicated by Professor Fullerton, and quoted later in this thesis, the most significant obstacle is in understanding the different definitions of terms and their nuances as used in the different planning

models. Outside of these definitional changes, I think seven key changes must be made to the JOPP so that it can accomplish all of the services' needs.

The first significant difference between the planning models is the existence of the first step of the JOPP, initiation. The MDMP is the only other planning model that includes a step in the process prior to the mission analysis. Obviously, every planning model must begin a process. However, an important output for the MDMP in this step is issuing a warning order to subordinate headquarters. Also important within the MDMP is the flexibility to begin the process when the commander determines conditions have changed or the commander knows an order from the higher headquarters is pending.

Based on my conversation with Mr. Neuenswander, the JFACC would rarely perceive such a change that would require the JFACC to start a new JAEP. In order to accommodate all service requirements in the adoption of a single planning model, however, the JOPP should not only include the initiation step, but should formally include a warning order as an output to the step and allow commanders the ability to conduct a JOPP when they perceive that it is necessary. I do not think these additions to a universal JOPP would be objected to by the Navy, Air Force nor the Marine Corps.

This change to the JOPP, although minor with respect to what is already published within the JOPP, identifies another issue that must be considered. In order to adopt a single planning model, not only are changes to the JOPP necessary for making it acceptable to all of the services, but all of the services must also change in order to adopt the JOPP. For example, the ability to include warning orders or begin a JOPP at the operational level are relatively small changes to the JOPP. However, the Navy, Air Force and Marine Corps would also have to accept these changes in their process. In order to

adopt the JOPP as the single planning model at the operational level, every service would have to accept some changes in the method in which they conduct planning. With the exception of the agreement on a common definition of terms, which I discuss below, the changes are not significant enough to create resistance within the services.

Every planning model currently includes, either as the first or second step, some form of a mission analysis. The most significant difference between the planning models is in the JAEP. The JAEP conducts an initial IPB and an initial COG analysis during the mission analysis step and then concludes the IPB and COG analysis during the COA development step. Based on my discussions with Mr. Neuenswander and Mr. Shoupe concerning why the Air Force conducts these analyses over two steps in their process, as opposed to the single step as do the other services, this analysis is conducted across two steps because of the way the JAEP is simultaneously conducted with the JOPP. Given the JAEP provides input to the JOPP, and the JOPP also provides input to the JAEP, I think the JFACC conducts an initial form of the mission analysis in order to provide the necessary inputs to the JOPP, and then completes its planning as part of the next step in the JAEP after receiving information from the JOPP. As Mr. Shoupe explained in his interview with me, "The JAEP may, again ... may look at COGs in MA [mission] analysis], certainly will if the COGs are not directed by JFC. Once settled on, they are settled on at Theater Strategic level (call made by JFC), but we [JFACC] may look at them again with an eye to what airpower can effect, direct, indirect, etc. To get at the COG (nesting, systems of systems, etc)."33 In order to create and standardize a single planning model, the Air Force would have to agree to complete its IPB and COG analysis during this step of the process. I believe this is possible. Just as every planning model

discusses updating staff estimates routinely throughout the process, I believe the IPB and COG analysis can also be continuously updated throughout the process. The sub-steps involved in each of the different planning models are very similar, even considering the differences of the JAEP.

The next significant difference between planning models is the COA development step in the JOPP. Because the JOPP is used at the strategic level in addition to the operational level of war, the JOPP includes a significant focus on the deployment and sustainment concept. While important, these differences are fairly minor and reflect a focus of the staff rather than a different process. The language used to describe each of the planning models with respect to COA development is very similar. Although the NPP has a much greater emphasis on the commander's role in COA development, it also closely aligns with the JOPP's COA development. With the difference between the JAEP and JOPP as discussed previously, little other changes are required in this step of the JOPP. Another key difference in the COA development step is the decision of the Army to change from main and supporting efforts, as used by the JOPP and all other planning models, to a decisive operation, shaping operation, and sustaining operations. As I discussed previously, a common agreement on the terms used in the planning model must be agreed to when adopting the JOPP. Professor Fullerton agreed with this concept, "One just has to spend a little time clarifying definitions to ensure we are all speaking the same language and understand the nuances."³⁴ I think the Army would have to agree to return to main and supporting efforts in order to adopt a single planning model. While I do not think this change is significant, I also do not think that the Army would readily give up using the terms decisive operation, shaping operation and sustaining operation.

The next truly significant difference in the planning models is the NPP's and MCPP's combination of two steps of the JOPP. The NPP and MCPP combine COA comparison and COA approval into a single step. I believe it would be a relatively easy change for the Navy and the Marine Corps to break that step into two steps and adopt the JOPP as the single planning model. Within these steps, all of the services accomplish nearly the same tasks, and so the JOPP would simply identify two steps in the process.

Within the COA approval step of the JOPP, the only change needed would be the addition of a warning order to subordinate headquarters, which is currently issued under the MDMP. Again, I do not think this change is significant, but to accommodate the other services' requirements, the JOPP would need to incorporate the use of warning orders throughout the process.

During the last step of the JOPP, plan and order development, the JOPP involves a much greater variety of plans or other orders than do the other services. For example, the JOPP includes a requirement to develop a nuclear strike plan and a deployment plan. The JOPP would have to be written broadly enough to encompass all of the plans which the services need to produce. Additionally, in this step the NPP and the MCPP conduct a reconciliation to ensure the orders and annexes of the orders are all in agreement with each other. The JOPP should incorporate these additions as a formal portion of the JOPP in order to ensure that this is accomplished. Although not formally written into the JOPP, MDMP or JAEP, the services already conduct this kind of editing in preparing their orders, so I do not think this would be a difficult change to make in the process.

The final significant difference in the planning models is the use of a transition step by the NPP and MCPP. The other services all conduct these transition functions as a

part of the planning process, however they are formalized in the NPP and MCPP. JOPP should formalize these functions inside the planning model. Again, as each of the services already conducts these functions, this should not be a difficult change to adopt.

Two of the articles that I reviewed in chapter two speak specifically toward moving toward a single planning model as I proposed here. Major Smith in his 1999 SAMS monograph proposed using the JOPP at the corps level in place of the MDMP. Major Smith clearly demonstrated that it was possible to make this change, but he sites three primary reasons for this change which I do not think are important. Major Smith concluded that the JOPP's focus on COGs as opposed to decisive points, an operational approach to requesting forces as opposed to the Army's more tactical approach to determining what capabilities have been assigned to the organization, and the JOPP's focus on a strategic endstate beyond the solely military endstate were the primary reasons for adopting the JOPP in place of the MDMP at the Corps level. Major Smith's monograph, now almost a decade old, remains relevant now as the Army's doctrine tasks division and corps level staffs to operate as JTF headquarters. As the results from the interviews will demonstrate in the next section, however, Major Smith over-emphasizes the level of friction involved in working with the different planning models.

Colonel Anderson and Colonel Slate concluded in their *Military Review* article that the military should adopt a single planning model as well, and they proposed a combination of planning models based mostly on the Navy's CES process. Again, I think Colonel Anderson and Colonel Slate have demonstrated that the adoption of a single planning model is possible. However, they also suggested that, "Each [service] clings to its own parochial method of staff planning, and each approaches military-decisionmaking

procedures in radically different ways."³⁵ As I demonstrated in this portion of chapter four, I do not think the planning models are significantly different.

Interview Results

The final portion of this chapter is devoted to reviewing the results of the interviews I conducted while researching this thesis. As I described in chapter three, I thought the interviews I conducted would be used to confirm the existence of friction between the planning models and then describe the history of the planning models in order to determine if a difference in the models exists based on the reasons or methods the services use to conduct planning. However, I quickly changed the focus of my interviews as I began to interpret the data that I gathered after each interview. As such, the results of the interviews I conducted fall into four basic categories: a lack of friction between the models; confirmation that the models are similar enough to be combined into a single planning model; becoming more joint and adopting a single model inherently dilutes the process and expertise that is involved in the service planning models; and there is no demand to change the planning models to become more joint. I explain each of these four categories below.

The most significant finding based on my interviews is the lack of friction between the models. When I started this research, I anticipated a general agreement that the existence of so many different planning models would create an amount of friction between the planning models. Indeed, this thesis assumed that the friction between the planning models must be overcome in order to help the military become more 'joint' in nature. However, I could find no one who would confirm the existence of this friction. Colonel Klingaman indicated that although he had to switch outputs from the MDMP

model to the JOPP at times, there was little challenge in accomplishing this task. "We [CFLCC and ARCENT C35 staff] would change the products that resulted from the MDMP to suit the audience, and we generally put orders and plans in JOPES format. When we had to produce something like a Commander's Estimate for CENTCOM, I would construct that from the output of an MDMP process." Essentially, Colonel Klingaman indicates that he can overcome the little friction of changing between planning models. I think any officer with a similar background in planning would be able to overcome these potential friction points. Indeed, as Mr. Ancker indicated during his interview with me, no one when explaining to him that the MDMP needs to be changed, indicated that friction with another planning model was the reason that change was needed. As an example of the changes that directly correlate to service compatibility, Mr. Ancker explained that the change from Battlefield Operating Systems (BOS) to Warfighting Functions (WFF) was conducted to better align the MDMP with MCPP. Therefore, friction between the models is essentially non-existent.

Because I did not believe this initially, I contacted Major Fuller, who I knew from a previous assignment and also knew was working as an Army battalion operations officer under a Marine Corps Regiment in Iraq. Major Fuller also indicated that there was no friction between the planning models, "There was no friction caused by (even arguably perceived) different planning models. In my opinion, friction arose from differing opinions on evaluations of the current situation in which planning was occurring for future operations." Even at this very tactical level, the primary planner for an Army battalion working for a Marine regimental headquarters did not perceive friction based on different planning models. Mr. Shoupe even repeatedly indicated that the inherent

friction between the planning models was good and even necessary, "FRICTION: DIVERSITY......GOOD! Friction between the models is not what I meant, friction between the services and functional [experts] is the friction I think is required. I have never seen any friction between JAEP and JOPP. JAEP feeds the best AIR PLAN into the JOPP."³⁹ The friction Mr. Shoupe is discussing is not caused by using different planning models. The expert planners, using the same or different planning models, must remain diverse enough to ensure they can inform the JFC commander on the best method to employ the service's different capabilities.

Therefore, I found no evidence of friction between the planning models which must be reduced. In fact, the residual planning models followed by the services appear to follow each other very closely. Again, nearly every interview I conducted verified that the models are very similar and could be combined into a single model. None of the comments that I received indicate that a specific planning model must be used to accomplish a service-specific planning requirement. After discussing the differences between JAEP and MDMP and JOPP with Mr. Neuenswander, I asked whether the JOPP could be used by the same staff officers to arrive at the same COA as the JAEP would have arrived, and he simply said, 'yes, so what?' When asked a similar question, Mr. Ancker explained that he never receives feedback that the planning models used by the different services are so different that they require modification in order to ensure that the staff officers can interact with each other. Professor Sweeney, speaking from the perspective of an Army officer who had employed both the MDMP and the NATO planning process (although outside the scope of this thesis) indicated that, "...the MDMP

and NATO steps were essentially the same (minor word variations) and MDMP type processes were the norm...since JOPP was not yet in place in any great detail."⁴¹

While everything seems to indicate that it is possible to move to a single planning model, two more important factors arose in the interviews. First, that the move to be more joint is a move to dilute the expertise that the planners bring to the models. Mr. Shoupe responded most vehemently to my interview questions, specifically with respect to what was indicated by an effort to become more joint through the use of a single planning model, "JOINT by its very nature is a BIG compromise between the services. Compromise can be good, but it is rarely 'the best' of anything." Lieutenant Colonel Desy agreed with Mr. Shoupe, "[a] single model would be the lowest common denominator."

While the dilution of things as they become joint seems to be a key concern among many of the different services as indicated above, it does not address the concept of adopting and training a single planning model. Although everyone I interviewed said it is possible to use a single planning model, it is absolutely necessary to continue to have different services conducting the analysis of missions and developing a concept of operations. The expertise of planners using the models is important, not the model itself. And although everyone indicated that a single planning model could accomplish the same tasks as long as the individuals followed the process and the intent of the models, no one seemed interested in adopting a single planning model. Both Mr. Ancker and Mr. Neuenswander indicated that there was no need to change even to implement a single planning model. Indeed, Mr. Ancker indicated that change for the sake of change was

not only unimportant, but must absolutely be avoided. Therefore, there is no need to move to a single planning model.

As this chapter has demonstrated, it is possible to adopt a single planning model. Colonels Anderson and Slate arrived at the same conclusion in their article suggesting that everyone should adopt a form of the Commander's Estimate of the Situation, the predecessor of the NPP. The planning models, when analyzed step by step, are very similar. Only minor differences exist which would require only a clear definition of terms and steps within the JOPP to ensure that everyone understood how to accomplish the process required in each step. While some changes, as indicated previously, would have to be made to the JOPP in order to make it universally acceptable, none of the interviews I conducted indicated that a single planning model was necessary. There is no significant friction between the multiple planning models, which I thought would exist when starting this research, and there is no call from the users and experts of the different planning models at the operational level to move to a single planning model. Therefore, as I will indicate in the final chapter of this thesis, there is no need to force the services to adopt a single planning model simply to make a change.

¹ The concept for creating the table was based on a document that Lt Col James Tweet created for use in displaying the differences between the JAEP and the MDMP to students at the Command and General Staff College, Fort Leavenworth, Kansas.

² U.S. Department of the Army, *Army Planning and Orders Production*, 3-12.

³ U.S. Department of Defense, *Joint Operation Planning*, III-21

⁴ U.S. Department of the Army, *Army Planning and Orders Production*, 3-15.

⁵ Ibid., glossary-7.

- ⁶ U.S. Department of the Navy, Navy War College, Joint Military Operations Department, Navy War College 4111G, *Commander's Estimate of the Situation, Instructional Workbook for In-Class Work/Wargaming*, (Newport News, RI: Naval War College, 2004), 1-27.
- 7 U.S. Department of Defense, Command and Control for Joint Air Operations, III-5.
 - ⁸ U.S. Department of the Navy *Marine Corps Planning Process*, 2-1.
 - ⁹ U.S. Department of Defense *Joint Operation Planning*, III-29.
 - ¹⁰ U.S. Department of the Army, *Army Planning and Orders Production*, 3-33.
 - ¹¹ U.S. Department of the Navy, *Navy Planning*, 3-4.
- 12 U.S. Department of Defense, Command and Control for Joint Air Operations, III-9.
 - ¹³ Ibid.
 - ¹⁴ U.S. Department of the Navy, *Marine Corps Planning Process*, 3-1.
 - ¹⁵ U.S. Department of Defense, *Joint Operation Planning*, III-30.
 - ¹⁶ U.S. Department of the Army, Army Planning and Orders Production, 3-42.
 - ¹⁷ U.S. Department of the Navy, *Navy Planning*, 4-2.
- 18 U.S. Department of Defense, Command and Control for Joint Air Operations, III-13.
 - ¹⁹ U.S. Department of the Navy, *Marine Corps Planning Process*, 4-2.
 - ²⁰ Ibid., 4-1.
 - ²¹ U.S. Department of the Army, *Army Planning and Orders Production*, 3-54.
 - ²² U.S. Department of the Navy, *Navy Planning*, 5-3.
 - ²³ U.S. Department of the Navy, *Marine Corps Planning Process*, 5-1.
 - ²⁴ U.S. Department of Defense, *Joint Operation Planning*, III-34.
- 25 U.S. Department of Defense, Command and Control for Joint Air Operations, III-14.
 - ²⁶ U.S. Department of the Army, *Army Planning and Orders Production*, 3-58.

- ²⁷ U.S. Department of the Navy, *Navy Planning*, 6-3.
- ²⁸ Ibid., 6-4.
- 29 U.S. Department of Defense, $Command\ and\ Control\ for\ Joint\ Air\ Operations,$ III-15.
 - ³⁰ U.S. Department of the Navy, *Navy Planning*, 7-2.
 - ³¹ U.S. Department of the Navy, *Marine Corps Planning Process*, 7-1.
 - ³² Ibid., 7-2.
 - ³³ Shoupe, Dale S., email message to author, February 4, 2008.
 - ³⁴ Fullerton, G. Jeffrey, email message to author, February 5, 2008.
 - ³⁵ Anderson and Slate, 11.
 - ³⁶ Klingaman, James, email message to author, December 3, 2007.
 - ³⁷ Ancker, Clinton, interview by author, Fort Leavenworth, KS, January 23, 2008.
 - ³⁸ Fuller, Geoffrey, email message to author, January 6, 2008.
 - ³⁹ Shoupe, Dale S., email message to author, February 4, 2008.
- $^{\rm 40}$ Neuenswander, Matthew, interview by author, Fort Leavenworth, KS, January 18, 2008.
 - ⁴¹ Sweeney, Patrick C., email message to author, February 5, 2008.
 - ⁴² Shoupe, Dale S., email message to author, January 22, 2008.
 - ⁴³ Desy, James, email message to author, February 26, 2008.

CHAPTER 5

CONCLUSION

This chapter will summarize my conclusions based on the initial research questions and both the doctrinal research and interview-based experience research I conducted. First, I will answer directly the research questions I posed in chapter one.

Second, I will address the significance of the study that I completed. Finally, I will offer comments on possibilities for further research in related fields to the research that I pursued in this thesis.

Addressing the Research Questions

When I started this research, I began with a primary research question, "Should the military adopt the Joint Operation Planning Process as the planning model employed by all operational level commanders and staffs?" Secondary research questions included, "When compared with the MDMP, NPP, JAEP and MCPP, can the JOPP be substituted and arrive at the same outputs and products at the operational level? What modifications to the JOPP are necessary for adoption as the directed planning model? Are multiple planning models a source of friction?" I also began this research with six assumptions, listed in chapter one.

Based on the research and the interviews that I conducted, I do not believe that JOPP should be adopted as the single, mandated planning model for all service commanders and staffs at the operational level of war. My initial assumption of the existence of significant friction between planning models, based on the interviews I conducted, was false. Without this friction, there is no need to change. Indeed, the

changes necessary to adopt the JOPP as the single planning model would generate more costs than benefits. Adopting the JOPP would require not only the consent of all of the military services, but also force the services to alter their published doctrine. These doctrinal changes would subsequently cause the services to alter the officer and non-commissioned officer training programs and the professional education programs for the services as well.

The answer to the secondary research question about whether the JOPP could be used in place of the different planning models to arrive at the same outputs and products at the operational level of war is "yes." No one I interviewed, and none of the research I conducted indicated that a specific planning model is absolutely necessary to accomplish the service specific planning needs. In fact, every time I asked directly whether the same goal of a planning model, used by the same staff, could be accomplished through using the JOPP, the universal answer was that it could. However, also significantly lacking in every interview I conducted was a desire or need to move to a single planning model.

Major Smith in his SAMS monograph and Colonel Anderson and Colonel Slate in their *Military Review* article agreed that moving to a single planning model was important in reducing friction between divergent planning models. However, based on the interviews I conducted, there is essentially no friction between the planning models that cannot be overcome by experienced officers at the operational level. Colonel Klingaman indicated that it was easy for him to convert the product of the MDMP into the necessary format dictated by the JOPP. Lieutenant Colonel Desy also indicated that he easily converted the MCPP products into the JOPP formats. Certainly there is some inherent friction when moving between the models, and some loss of a staff's time and

effort with having to change products between planning models as Colonel Klingaman discussed. However, that level of friction is not serious enough to cause the military to adopt the JOPP at the operational level. Such a change would most likely be more disruptive than helpful. So while I anticipated mandating a change so that all of the services would adopt the JOPP as the model for use at the operational level of war, I no longer think this change is mandatory.

The final research question I pursued was to identify what changes to the JOPP would be necessary in order to make it universally acceptable. The following figure shows the JOPP, and indicates the structural changes I proposed to the JOPP to make it universally acceptable. In addition to the three structural changes – the addition of warning orders, the inclusion of reconciliation as a part of the plan or order development, and a formal transition step as the final step in JOPP – indicated in the figure, I proposed five additional changes to make the JOPP universally acceptable as a single planning model. First, all of the services would have to agree to a set of common definitions of terms in order to understand the intent of each of the steps. Second, the Air Force would have to agree to complete mission analysis, and specifically the analysis of COGs in the mission analysis step of the JOPP. Third, the Army would have to revert to terms "main and supporting efforts" in lieu of "decisive, shaping and sustaining operations." Fourth, the Navy and the Marine Corps would have to conduct COA comparison and COA approval in separate steps of the JOPP. Finally, the description of step seven, plan or order development and reconciliation, would have to be written broadly enough in order to accommodate all of the service habitual planning functions. These changes are not necessary with respect to the applicability of the JOPP currently. However,

implementing these changes would make it universally acceptable and therefore lead to its potential adoption in the future as the single planning model at the operational level.

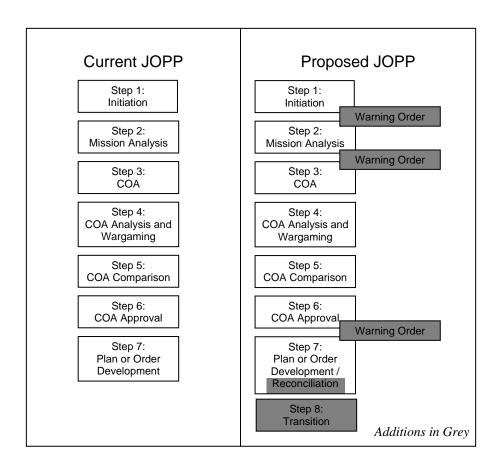


Figure 2. Proposed Changes to JOPP.

Significance of this Study

Although I no longer think the JOPP should be adopted as the single planning model, this study remains significant for professional officers. First, this study has confirmed that the JOPP, as well as other service planning models, are similar and remain valid planning models for use at the operational level. When tasked, therefore, officers in any capacity must maintain the ability to employ JOPP and their service specific planning

models at the operational level of war. I am also convinced, based on the interviews I conducted, the expertise which is gained through the employment of the different planning models is important in ensuring each service informs the JTF commander on the best COA for each service. As Mr. Shoupe explained, this diversity is not gained by the use of different planning models. The diversity is maintained by expertise in the capabilities of different services which ensures that the JFC has the best information in order to make the best decisions at the strategic level. Finally, while not necessarily important with respect to making a single planning model, I think the JOPP could benefit from the changes I recommended in chapter four. Most specifically, I think the JOPP should incorporate a transition step as a formal part of the planning model.

Recommendations for Future Research

This study has compared different military planning models to one another and determined that there are essentially no significant differences between the models. Based on this determination, it is possible to change and alter the existing JOPP in order to make it adoptable by all of the services. Further research could be conducted by circulating the proposed changes to the JOPP to all services and gain feedback as to whether the services would agree to or object to adopting this planning model. The adoption of the JOPP as a single planning model remains an important concept. It is not only possible, but probably a viable concept for use in a future, less tumultuous period. This research should be revisited.

Additional research should be conducted to determine whether the services, using this new JOPP, would arrive at the same solutions and produce the same (or virtually the same) order using both the JOPP and their traditional planning model. This could be

conducted by using a controlled group to conduct essentially two planning sessions while tasked to employ two planning models, the JOPP and the service specific planning model. This is, however, problematic as the creation of one plan will most likely alter the method with which a second plan for the same circumstances is created.

Additional research opportunities also include the level to which JOPP, when employed by different staffs of officers, can be used. If JOPP is as easily interchanged as I think it is, then in any planning requirement where a service specific planning model is used, the JOPP could be substituted. In the MDMP, for example, battalions could employ the JOPP and arrive at the same COAs for their specific tactical problems. I think it would be interesting to see if this is true.

Outside the military services, other agencies who routinely work with the military such as the State Department may find the multiple planning models distracting. Perhaps further research would reveal that the military should move to a single planning model in order to better accommodate the other national agencies with which we routinely operate.

APPENDIX A

Table Describing Each of the Planning Model Steps

	Initiation	Mission Analysis	COA Development	COA Analysis and Wargaming	COA Comparison	COA Approval	Plan or Order Development	
JOPP	Review existing plans, analyze initial guidance, identify initial coordination requirements.	Gain understanding of problem, purpose of operation, conduct COG analysis, issue guidance for remainder of planning process.	Develop a concept of the operations, test for validity (adequate, feasible, acceptable, distinguishable, complete), sustainment concept, deployment concept, and task organization	Analyze COAs separately, wargame each COA against enemy MPCOA and MDCOA. Make analysis objective and comprehensive. Usually follows action, reaction, counteraction methodology.	Evaluated COAs independently against criteria, then compare COAs together, recommend COA to commander	Commander accepts COA, pushes COA higher for final approval, directs staff actions in developing plans and orders.	10 plan development activities - usually conducted parallel, collaborative, and iterative fashin to produce complete plan for execution.	
МДМР	"Receipt of Mission" Analyze HHQ OPORD or WARNO. Produce initial guidance, timeline, and WARNO to subordinate HQ	Help commanders refine situational understanding and determine their mission. MDMP does not analyze or determine COG, focused solely on DPs	Analyze relative combat power, generate options, array initial forces, develop concept of operations, assign headquarters, test for validity. Army's use of decisive, shaping and sustaining operations	"COA Analysis (War Game)" staff synchronizes BOS [WFF] for each COA, uses synch matrix (usually), action, reaction, counteraction methodology.	Identify COA advantages and disadvantages, compare COAs, recommend COA to commander	Commander issues final planning guidance, accepts COA, staff publishes WARNO, updated CCIR	"Orders Production" convert COA statements and sketches into 5 paragraph OPORD. Brief to subordinates.	
NPP		Provide clear understanding of overall situation in order to develop friendly courses of action.	Analyze relative combat power, generate options, recommend C2 structure, develop concept of operations, test for validity.	Aim is to determine sound basis for determining feasibility and acceptability of COA. Action, reaction, counteraction methodology, normally captured on synch matrix.	"COA Comparison and Decision" compare against eval criteria, construct decision matrix, recommend COA to commander, commander selects COA, issue WARNO to subordinates		Produce 5 paragraph OPORD, conduct reconciliation to ensure basic order and all annexes are complete and in agreement.	"Transition" ensure successful shift from planning to execution, conducted internally by staff and / or externally with subordinates. Includes rehearsals and confirmation back briefs.
JAEP		Generate staff estimates, conduct analysis of the situation, begin initial COG analysis - focused on capabilities and intentions of the enemy.	"Situation and COA Development" completes analysis of COG, decisive points, creates concept of operations, test for validity.	"COA Analysis" Identifies advantages and disadvantages in each COA, uses synch matrix, follows action, reaction, counteraction methodology.	ID strengths and weaknesses, compare advantages and disadvantages, recommend a COA to the commander.	"COA Selection" staff recommends COA, JFACC accepts or directs further refinement.	"JAOP Development" prepare order which integrates efforts of the joint air forces and capabilities.	
МСРР		Review and analyze orders, guidance, and information from higher headquarters order to produce mission statement. Also conducts an analysis of COG.	Generate options for follow-on wargaming and comparison to satisfy mission, commander's intent and commander's guidance. Test for validity.	"COA War Game" - Identifies additional tasks, revises graphic and narrative COA statement, identifies branches and seques for further planning.	"COA Comparison and Decision" commander evaluates friendly COA against criteria and each other, selects COA, staff issues WARNO		"Orders Development" prepare the order, conduct reconciliation and orders crosswalk, gain commander's final approval	"Transition" ensure successful shift from planning to execution, conducted internally by staff and / or externally with subordinates. Includes rehearsals and confirmation back briefs.
Differences	Key difference is publication of WARNOs - not conducted by JOPP. No formal step in NPP, JAEP, MCPP	Specific difference between MDMP and all other planning models is the use of COGs. MDMP does not consider a COG, but considers DPs.	JAEP completes COG analysis in this phase. Only Army uses Decisive, Shaping and Sustaining operations, all others use main and supporting efforts.	Essentially none.	NPP and MCPP recommend and select a COA in this step. All other models simply recommend COA. All use similar terminology and compare COAs to eval criteria.	In JOPP, COA is pushed to higher headquarters for approval. MDMP and JAEP, commander approves COA and / or issues refined guidance to staff.	NPP and MCPP conduct reconciliation and MCPP adds a cross walk to double check that the orders agree between base and annexes, and to ensure orders are complete.	Only MCPP and NPP conduct a transition step.

APPENDIX B

JOPP Illustration and Sub-Step Figures

JP 5-0 publishes the following figures. Figure 3 below shows the JOPP. Figures 4 through 8 show the inputs, processes and outputs of steps 2 through 6 within the JOPP. Step 1 and Step 7 have no additional figures published in JP 5-0.

THE JOINT OPERATION PLANNING PROCESS	
THE JOINT OPERATION PLANNING PROCESS	
Step 1:	
Initiation	
Initiation	
Step 2:	
Mission Analysis	
Step 3:	
·	
Course of Action (COA) Development	
Step 4:	
COA Analysis and Wargaming	
Step 5:	
COA Comparison	
Step 6:	
COA Approval	
Step 7:	
Plan or Order Development	

Figure 3. JOPP Source: U.S. Department of Defense, *Joint Operation Planning*, 2003, III-20.



Figure 4. JOPP Mission Analysis *Source:* U.S. Department of Defense, *Joint Operation Planning*, 2003, III-23.

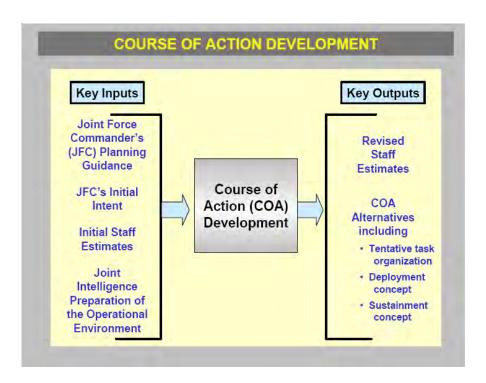


Figure 5. JOPP COA Development Source: U.S. Department of Defense, *Joint Operation Planning*, 2003, III-29.

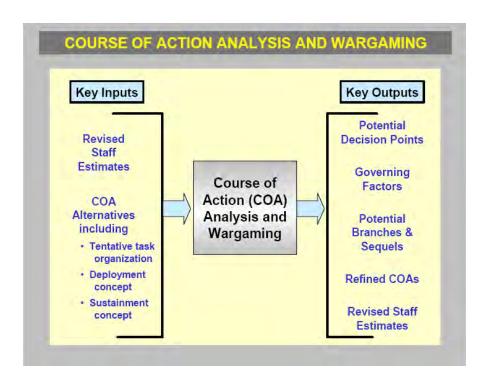


Figure 6. JOPP COA Analysis and Wargaming *Source:* U.S. Department of Defense, *Joint Operation Planning*, 2003, III-30.

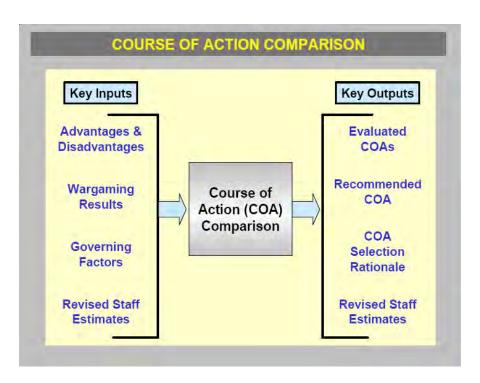


Figure 7. JOPP COA Comparison Source: U.S. Department of Defense, *Joint Operation Planning*, 2003, III-33.

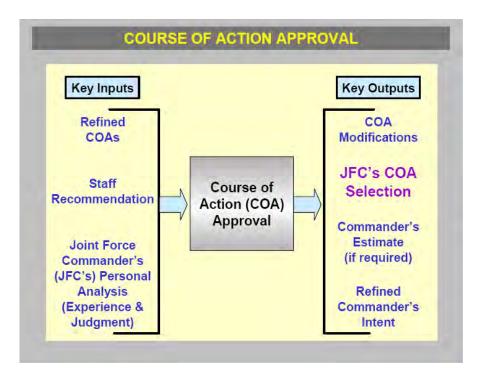


Figure 8. JOPP COA Approval *Source:* U.S. Department of Defense, *Joint Operation Planning*, 2003, III-35.

APPENDIX C

MDMP Illustration and Sub-Step Figures

FM 5-0 publishes the following figures. Figure 9 shows the MDMP, and each additional figure shows the inputs, processes and outputs of each step within the MDMP. Step 6 and Step 7 in the MDMP do not have associated figures published in FM 5-0.

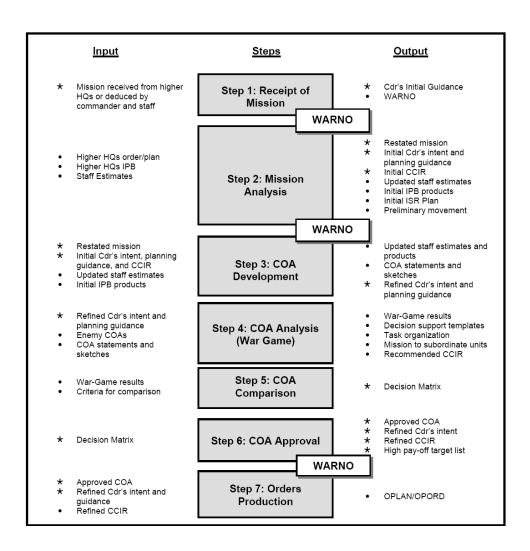


Figure 9. MDMP

Source: U.S. Department of the Army, Army Planning and Orders Production, 2005, 3-3.

Input

- Mission from higher HQ or deduced by the commander and staff
- Higher HQ plan, OPORD, or WARNOs

Process

- Alert the staff
- Gather tools
- Update estimatesConduct initial assessment

Output

- Commander's initial guidance
- Initial operational timeline
- Initial WARNO

Figure 10. MDMP Receipt of Mission

Source: U.S. Department of the Army, Army Planning and Orders Production, 2005, 3-12.

Input

- Higher HQ plan or order
- Higher HQ IPB
- Updated staff estimates
- Initial Cdr's guidance

Process

- Analyze the higher HQ order
- Perform initial IPB
- Determine specified, implied, and essential tasks
- Review available assets
- Determine constraints
- Identify critical facts and assumptions
- · Perform risk assessment
- Determine initial CCIR and EEFI
- Determine the initial ISR plan
- Update operational timelines
- Write the restated mission
- Deliver a mission analysis briefing
- Approve the restated missionDevelop the initial Cdr's intent
- Review facts and assumptions

Output

- Updated staff estimates & products
- Initial IPB
 - Enemy SITTEMPs
 - MCOO
 - High Value Targets
- Mission analysis briefing
- Restated mission
- Initial Cdr's intent
- Cdr's planning guidance
- Updated operational time-line
- Warning order

Figure 11. MDMP Mission Analysis

Source: U.S. Department of the Army, Army Planning and Orders Production, 2005, 3-16.

Input

- Restated mission
- Cdr's intent
- · Cdr's planning guidance
- Initial CCIR
- Updated staff estimates
 & products
- Enemy COAs (event templates)

Process

- Analyze relative combat power
- Generate options
- Array initial forces
- Develop the concept of operations
- Assign headquarters
- Develop COA statements and sketches

Output

- Updated staff estimates and products
- COA statements and sketches
- · Course of action briefing
- Refined Cdr's guidance

Figure 12. MDMP COA Development

Source: U.S. Department of the Army, Army Planning and Orders Production, 2005, 3-29.

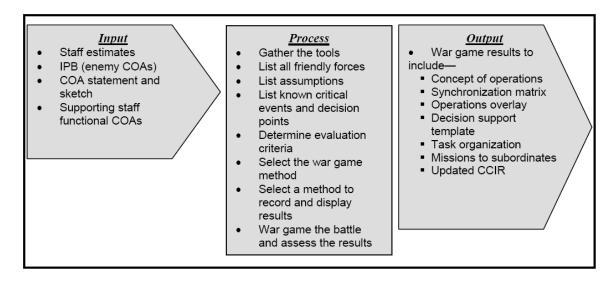


Figure 13. MDMP COA Analysis (War Game)

Source: U.S. Department of the Army, Army Planning and Orders Production, 2005, 3-43.

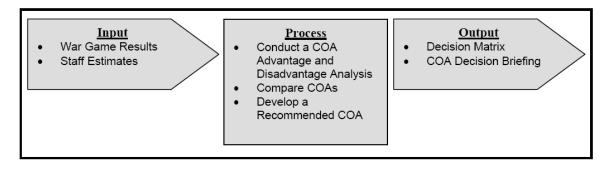


Figure 14. MDMP COA Comparison

Source: U.S. Department of the Army, Army Planning and Orders Production, 2005, 3-54.

APPENDIX D

NPP Illustration and Sub-Step Figures

NWP 5-01 publishes the following figures. Figure 15 shows the NPP, and each additional picture shows the inputs, processes and outputs of each step within the NPP.

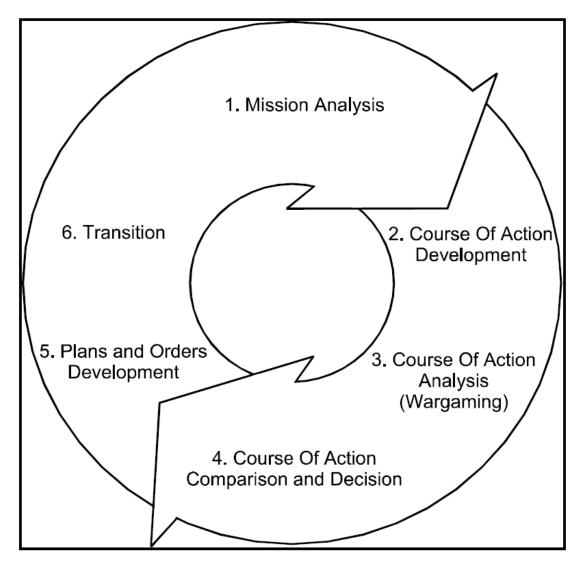


Figure 15. NPP Source: U.S. Department of the Navy, Navy Planning, 2007, 1-4.

Inputs	Process	Outputs
Higher Headquarters	Identify Source(s) of Mission	Approved Mission
Plans, Orders, and	Determine Support Relationships	Statement
Guidance	Analyze Higher Commander's Mission	Commander's Planning
Intelligence Products	Determine Specified, Implied, Essential Tasks	Guidance
Staff Estimates	State Purpose	Commander's Intent
Navy Commander	Identify Externally Imposed Limitations	Commander's Critical
Initial Guidance	Analyze Available Forces and Assets	Information Requirements
	Determine Critical Factors, Centers of Gravity, and Decisive Points	Warning Order
	Develop Planning Assumptions	
	Conduct Initial Risk Assessment	
	Develop Proposed Mission Statement	
	Conduct Mission Analysis Briefing	
	Develop Initial Commander's Intent	
	Develop Commander's Critical Information Requirements	
	Develop Commander's Planning Guidance	
	Develop Warning Order	

Figure 16. NPP Mission Analysis

Source: U.S. Department of the Navy, Navy Planning, 2007, 2-1.

Inputs	Process	Outputs
Higher Headquarters WARNORD OPORD Navy Commander Mission Statement and Commander's Intent	Analyze Relative Combat Power Generate COA Options Test for Validity Recommend Command and Control Relationships Prepare COA Sketches and Statements	Approved COAs Refined ECOAs Wargaming Guidance Evaluation Criteria Initial Staff Estimates
Commander's Planning Guidance Updated IPOE ECOAs	Prepare COA Briefing Develop COA Analysis and Evaluation Guidance	

Figure 17. NPP COA Development *Source:* U.S. Department of the Navy, *Navy Planning*, 2007, 3-1.

Inputs	Process	Outputs
Navy Commander	Organize for Wargaming	War Game Results
Refined Commander's	List All Friendly Forces	List of Critical
Intent	Review Assumptions	Events and Decision Points
Wargaming Guidance	List Known Critical Events	Updated IPOE
Approved COAs	Determine the Governing Factors	Subordinate Commander's
Refined ECOAs	Select Wargaming Method	Estimates of Supportability
Initial Staff Estimates	Record and Display Results	Branches and Sequels
55	Wargame Combat Action and Assess Results	Identified for Further
	The War Game Process	Planning
	Refine Staff Estimates	_
	Update and Refine IPOE Products	

Figure 18. NPP COA Analysis (Wargaming)

Source: U.S. Department of the Navy, Navy Planning, 2007, 4-1.

Inputs	Process	Outputs
Inputs	Process	Outputs

COA War Game Worksheet Updated IPOE Decision Support Matrix Refined Staff Estimates Governing Factors Perform COA Comparison
Perform COA Evaluation
Make Final Test of Feasibility and Acceptability
State Commander's Decision
Make Synchronization Matrix
Develop CONOPs
Refine IPOE

COA Decision CONOPs Updated IPOE Refined Staff Estimates WARNORD

Figure 19. NPP COA Comparison and Decision *Source:* U.S. Department of the Navy, *Navy Planning*, 2007, 5-1.

Inputs	Process	Outputs
Task Organization	Prepare Plans and Orders	OPORD/OPLAN
Mission Statement	Reconcile Plans and Orders	Refined IPOE
Commander's Intent	Backbrief and Crosswalk Plans and Orders	Planning Support Tools
CONOPS	Commander Approves and Issues Plans and Orders	
Staff Estimates		

Figure 20. NPP Plans and Orders Development *Source:* U.S. Department of the Navy, *Navy Planning*, 2007, 6-1.

Inputs	Process	Outputs
OPORD/OPLAN	Transition Briefing	Subordinate Commanders
Refined IPOE	Transition Drills	and Staffs
Outline FRAGORDs For Branches	Confirmation Briefing	Ready to Execute the Order and Possible Branches
Information for Future Missions/Sequels		Prepared to Plan Sequels

Figure 21. NPP Transition *Source:* U.S. Department of the Navy, *Navy Planning*, 2007, 7-1.

APPENDIX E

JAEP Illustration

JP 3-30 publishes the following figure to illustrate the JAEP. Neither JP 3-30 nor AFDD 2 use additional figures with the steps within JAEP.

JOINT AIR ESTIMATE PROCESS

Mission Analysis

Intelligence preparation of the battlespace (IPB) is initiated. Phase focuses on analyzing the joint force commander's mission and guidance to produce a joint air component mission statement.

Situation and Course of Action (COA) Development

IPB is refined to include adversary COAs. Adversary and friendly centers of gravity are analyzed. Multiple air COAs or one air COA with significant branches and sequels are developed.

COA Analysis

Friendly COAs are wargamed against adversary COAs.

COA Comparison

Wargaming results are used to compare COAs against predetermined criteria.

COA Selection

Decision brief to joint force air component commander (JFACC) with COA recommendation. JFACC selects COA.

Joint Air Operations Plan Development

Selected COA is developed into a joint air operations plan.

Figure 22. JAEP

Source: U.S. Department of Defense, Command and Control for Joint Air Operations, 2006, III-4.

APPENDIX F

MCPP Illustration and Sub-Step Figures

MCWP 5-1 publishes the following figures. Figure 23 shows the MCPP, and each additional figure shows the inputs, processes and outputs for each step in MCPP.

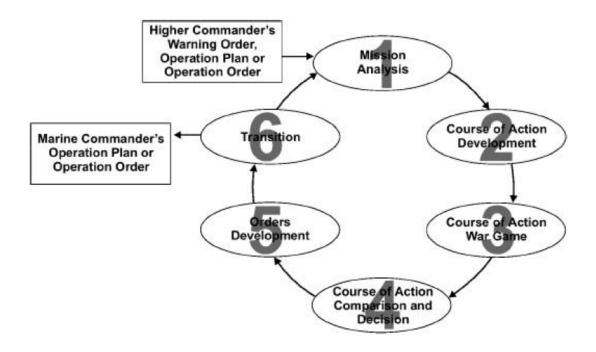


Figure 23. MCPP Source: U.S. Department of the Navy, Marine Corps Planning Process, 2000, 1-3.

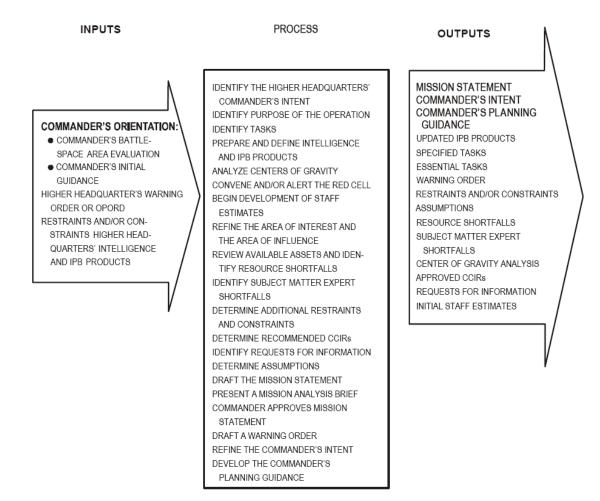


Figure 24. MCPP Mission Analysis

Source: U.S. Department of the Navy, Marine Corps Planning Process, 2000, 2-1.

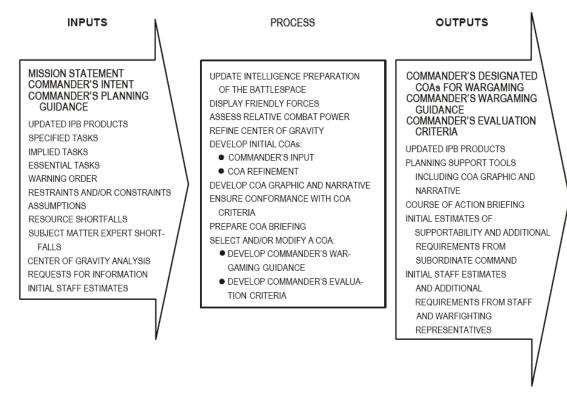


Figure 25. MCPP COA Development Source: U.S. Department of the Navy, Marine Corps Planning Process, 2000, 3-1.

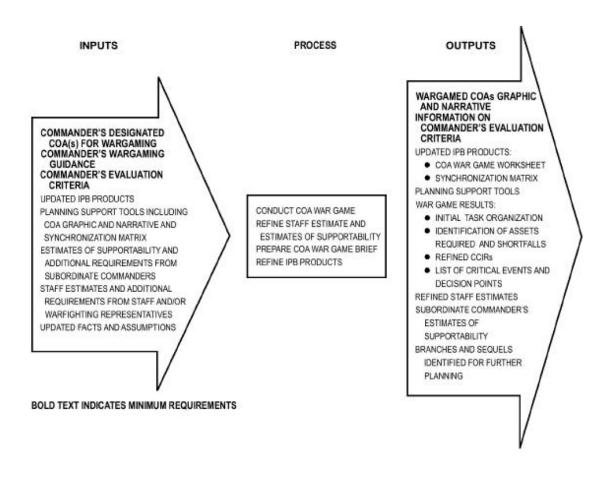


Figure 26. MCPP COA War Game Source: U.S. Department of the Navy, Marine Corps Planning Process, 2000, 4-1.

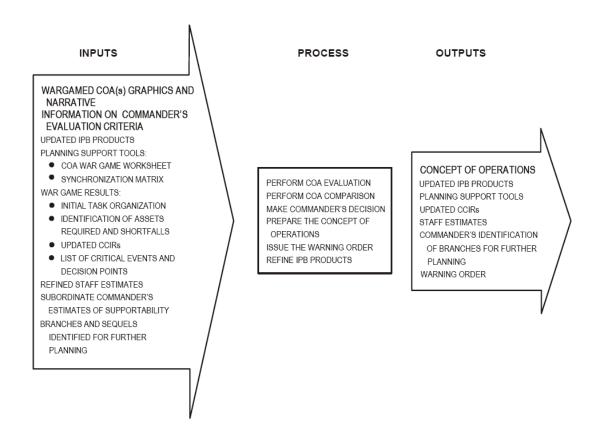


Figure 27. MCPP COA Comparison and Decision *Source:* U.S. Department of the Navy, *Marine Corps Planning Process*, 2000, 5-1.

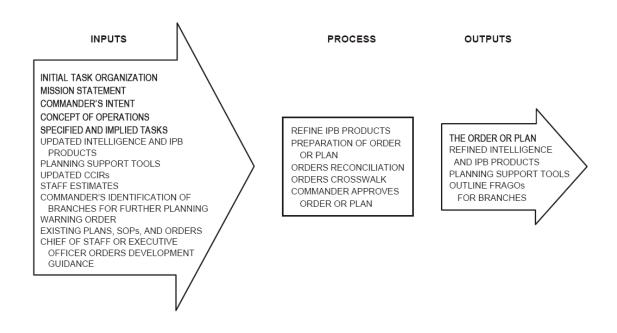
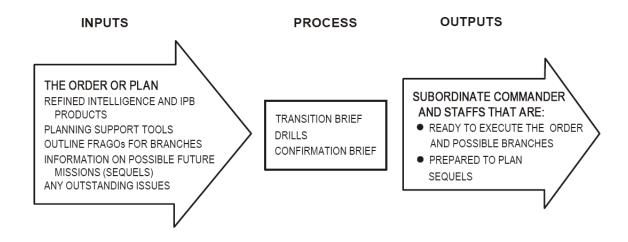


Figure 28. MCPP Orders Development Source: U.S. Department of the Navy, Marine Corps Planning Process, 2000, 6-1.



BOLD TEXT INDICATES MINIMUM REQUIREMENTS

Figure 29. MCPP Transition Source: U.S. Department of the Navy, Marine Corps Planning Process, 2000, 7-1.

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